

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
Florida Power & Light Company)	Docket Nos. 52-040-COL
)	52-041-COL
(Turkey Point Units 6 & 7))	
)	ASLBP No. 10-903-02-COL
(Combined License))	

**Florida Power & Light Company's Answer Opposing
Mark Oncavage, Dan Kipnis, Southern Alliance for Clean Energy,
and National Parks Conservation Association's Petition to Intervene and Request
for Hearing On Turkey Point Units 6 & 7
Combined Construction and Operating License Application**

September 13, 2010

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I. INTRODUCTION

Florida Power & Light Company (“FPL” or “Applicant”) hereby submits this answer (“Answer”) opposing the Petition to Intervene and Request for Hearing (“Petition”) filed by Mark Oncavage, Dan Kipnis, Southern Alliance for Clean Energy (“SACE”), and National Parks Conservation Association (“NPCA”) (collectively the “Petitioners”) in this proceeding on August 17, 2010. Petitioners seek to intervene in this proceeding and request that the Nuclear Regulatory Commission (“Commission” or “NRC”) conduct a hearing regarding FPL’s application for a combined license (“COL”) for new Units 6 & 7 at the Turkey Point site in Miami-Dade County, Florida, (“Turkey Point Units 6 & 7”). The Petition should be denied because Petitioners have failed to propose an admissible contention.

The Commission’s regulations and case law clearly set forth the requirements that a petitioner must satisfy in order to propose an admissible contention. As this Answer

describes more fully below, the Commission's current pleading standards were designed to raise the threshold for the admission of contentions. The purpose of these intentionally strict admissibility requirements is to ensure that hearings would focus on concrete issues that are relevant to the proceeding and that are supported by some factual and legal foundation. Each of Petitioners' Contentions fails to reach the required threshold, falling short of any number of the applicable pleading standards. Accordingly, the Board should reject all of Petitioners' Contentions and deny their Petition.

II. BACKGROUND

FPL submitted an application to the NRC for a COL for Turkey Point Units 6 & 7 ("Application") on June 30, 2009.¹ The Application and this proceeding are governed by 10 C.F.R. Part 52. In particular, Subpart C of the Part 52 rules sets out the procedures and requirements applicable to the issuance of combined licenses.

The NRC promulgated its Part 52 regulations in 1989,² and amended them in 2007,³ with the aim of enhancing the safety and reliability of nuclear power plants through standardization and early resolution of safety and environmental issues in licensing proceedings. *See* 53 Fed. Reg. 32,060, 32,061 (Aug. 23, 1988); 54 Fed. Reg. at 15,372, 15,373; 72 Fed. Reg. at 49,352. The Part 52 rules accomplish this aim through

¹ Application for Combined License for Turkey Point Units 6 & 7 (Rev. 0, June 30, 2009), transmittal letter available at ADAMS Accession No. ML091830589. Entire Application available at <http://www.nrc.gov/reactors/new-reactors/col/turkey-point.html>. *See also* Florida Power & Light Company; Notice of Receipt and Availability of Application for a Combined License, 74 Fed. Reg. 38,477 (Aug. 3, 2009).

² Final Rule, Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors, 54 Fed. Reg. 15,372 (Apr. 18, 1989).

³ Final Rule, Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352 (Aug. 28, 2007).

three principal regulatory processes: Early Site Permits (governed by Subpart A of Part 52); Design Certifications (governed by Subpart B); and Combined Licenses (governed by Subpart C). As the Commission explained:

Part 52 is intended to improve the licensing of nuclear power plants by the use of these procedural innovations. . . . Subpart A of Part 52 formalizes the early site approval process, allowing a prospective applicant to obtain a permit for one or more pre-approved sites on which future nuclear power stations can be located. Subpart B carries forward the standard design approval process . . . in much the same way, allowing a prospective applicant, vendor, or other interested party to obtain Commission approval of a design of a complete nuclear power plant or a major portion of such a plant. Subpart C establishes procedures for the issuance of a combined construction permit and conditional operating license. . . This structure reveals the overall purpose of Part 52: to improve reactor safety and streamline the licensing process by encouraging standard designs and by permitting early resolution of environmental and safety issues related to the reactor site and design.

53 Fed. Reg. at 32,062.

The Application references a certified design, Appendix D to 10 C.F.R. Part 52 (Final Rule, AP1000 Design Certification, 71 Fed. Reg. 4,464 (Jan. 27, 2006) (“AP1000 DC Rule”)). Those aspects of the Turkey Point Units 6 & 7 design that are included in the AP1000 DC Rule have already been approved by the Commission and cannot be challenged in this COL proceeding. 10 C.F.R. § 52.63(a). The Application also references Westinghouse’s application to amend the AP1000 DC Rule (through AP1000 DCD Revision 16 (“Revision 16”) as updated by AP1000 DCD Revision 17 (“Revision 17”)). Again, those aspects of a certified design under consideration for a potential rule change are not litigable in a facility COL proceeding.⁴

⁴ The AP1000 Design Control Document Revs. 16 and 17 are available at <http://www.nrc.gov/reactors/new-reactors/design-cert/amended-ap1000.html> and at ADAMS Accession Nos. ML071580939 and ML083230868, respectively. The Commission has not yet issued an amendment to the AP1000 DC Rule to incorporate either Revision 16 or Revision 17. However, it is Commission

Footnote continued on next page

The NRC Staff conducted a sufficiency review and, finding the Application acceptable for docketing, docketed the Application on September 4, 2009. *See* Florida Power & Light Company, Acceptance for Docketing of an Application for Combined License for Turkey Point Units 6 & 7 Nuclear Power Plants. 74 Fed. Reg. 51,621 (Oct. 7, 2009). On June 18, 2010, the NRC published its Notice of Hearing and Opportunity to Petition for Leave to Intervene and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation on a Combined License for Turkey Point Units 6 & 7. 75 Fed. Reg. 34,777. Petitioners filed their Petition on August 17, 2010.

To be admitted as a party to this proceeding, Petitioners must demonstrate standing and submit at least one admissible contention. 10 C.F.R. § 2.309(a). FPL does not object to Petitioners' standing in this proceeding. As discussed below, however, Petitioners have not submitted any admissible contentions. Therefore, the Petition must be denied.

III. PETITIONERS HAVE NOT SUBMITTED ANY ADMISSIBLE CONTENTIONS

The Commission's Rules of Practice require that a petitioner plead at least one admissible contention to be admitted as a party in this proceeding. 10 C.F.R. § 2.309(a). As set forth below, Petitioners have proffered no admissible contention and therefore their Petition must be denied.

Policy "that a contention that raises an issue on a design matter addressed in the design certification application should be resolved in the design certification rulemaking proceeding, and not the COL proceeding." Statement of Policy on Conduct of New Reactor Licensing Proceedings, 73 Fed. Reg. 20,963, 20,972 (Apr. 17, 2008) ("New Reactor Proceedings Policy Statement").

A. Legal Standards for Contention Admissibility

The Commission's contention admissibility rules are "strict by design". *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001). While "federal courts permit considerably less-detailed 'notice pleadings', the Commission requires far more to plead a contention." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 505 (2001); *see also Fansteel, Inc.* (Muskogee, Oklahoma Site) CLI-03-13, 58 NRC 195, 203 (2003). 10 C.F.R. § 2.714 (now § 2.309) was amended in 1989 "to raise the threshold for the admission of contentions." Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168 (Aug. 11, 1989) ("Final Rule"). These rules were "toughened . . . because in prior years 'licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.'" *Millstone*, CLI-01-24, 54 NRC at 358 (citing *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999)). Under the NRC's rules of practice, "a protestant does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that such a dispute exists. The protestant must make a minimal showing that material facts are in dispute, thereby demonstrating that an 'inquiry in depth' is appropriate." Final Rule, 54 Fed. Reg. at 33,171 (quoting *Conn. Bankers Ass'n v. Bd. of Governors*, 627 F.2d 245, 251 (D.C. Cir. 1980)).

Accordingly, a petition "must set forth with particularity the contentions sought be raised." 10 C.F.R. § 2.309(f)(1). Petitioners must provide "a clear statement as to the basis for the contentions and [submit] supporting information and references to specific

documents and sources that establish the validity of the contention.” *USEC, Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006) (citing *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991)). Specifically, “for each contention,” the petition must:

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

10 C.F.R. § 2.309(f)(1). Contentions that do not satisfy each of these six requirements must be rejected. *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-09-8, 69 NRC 317, 323-24 (2009).

The petitioner bears the burden of proffering contentions that meet the NRC’s pleading requirements. *See Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 NRC 39, 41 (1998). Licensing boards are not to overlook deficiencies in contentions or to assume the existence of missing information. *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 73 (2009) (citing *Palo Verde*, CLI-91-12, 34 NRC at 155-56). In other words, “[a] contention’s proponent, not the licensing board, is responsible for formulating

the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions.” Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 22 (1998) (“1998 Policy Statement”). The requirements are discussed in detail below.

1. Petitioner Must Specifically State the Issue of Law or Fact to Be Raised

Each contention must provide “a specific statement of the issue of law or fact to be raised or controverted.” 10 C.F.R. § 2.309(f)(1)(i). To be admissible, a “contention must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application].” *Millstone*, CLI-01-24, 54 NRC at 359-60. Moreover, the Commission has explained that Petitioners “must articulate at the outset the specific issues they wish to litigate as a prerequisite to gaining formal admission as parties.” *Oconee*, CLI-99-11, 49 NRC at 338.

2. Petitioner Must Explain the Basis for the Contention

In addition, petitioners must provide “a brief explanation of the basis for the contention.” 10 C.F.R. § 2.309(f)(1)(ii). A petitioner must provide the licensing board with “sufficient foundation” to “warrant further exploration.” *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-942, 32 NRC 395, 428 (1990) (footnote omitted). In other words, a petitioner must “provide some sort of minimal basis indicating the potential validity of the contention.” Final Rule, 54 Fed. Reg. at 33,170. While licensing boards generally admit “contentions” for litigation rather than “bases,” the Commission has recognized that “[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases.” *LES* (National Enrichment Facility), LBP-04-14, 60 NRC 40, 57 (2004) (citing *Public Service Co. of New Hampshire* (Seabrook Station,

Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom. Mass. v. NRC*, 924 F.2d 311 (D.C. Cir.), *cert. denied*, 502 U.S. 899 (1991)). Therefore, the lack of an adequate basis is sufficient grounds for rejecting a proposed contention.

3. Contentions Must Be Within the Scope of the Proceeding

Petitioners must also demonstrate “that the issue raised in the contention is within the scope of the proceeding.” 10 C.F.R. § 2.309(f)(1)(iii). The scope of this proceeding for which this licensing board has been delegated jurisdiction was set forth in the Commission’s Hearing Notice. *See Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985). The Hearing Notice explained that the Licensing Board would consider FPL’s Application under Part 52 for a COL for Turkey Point Units 6 & 7. 75 Fed. Reg. at 34,778. Licensing boards “are delegates of the Commission” and so may “exercise only those powers which the Commission has given (them).” *Public Service Co. of Indiana, Inc.* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170 (1976) (footnote omitted); *accord Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979). Any contention that falls outside the specified scope of this proceeding is inadmissible.

Any contention that challenges an NRC rule is outside the scope of the proceeding because “no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding.” *See* 10 C.F.R. § 2.335(a); *see also Entergy Nuclear Vermont Yankee, LLC & Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station); *Entergy Nuclear Generation Company & Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-07-3, 65 NRC 13, 18 n.15 (2007). Petitioners “may not demand an adjudicatory hearing to attack generic NRC requirements

or regulations, or to express generalized grievances about NRC policies.” *Oconee*, CLI-99-11, 49 NRC at 334. Contentions seeking to impose requirements in addition to those contained in Commission regulations impermissibly challenge those regulations. *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 394-95 (1987); *see also Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit No. 1), LBP-83-76, 18 NRC 1266, 1273 (1983) (explaining that when a Commission regulation permits the use of a particular analysis or technique, a contention asserting that a different analysis or technique should be used is an impermissible challenge to the regulation).

Similarly, it is well established that licensing boards “should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission.” *Oconee*, CLI-99-11, 49 NRC at 345. This principle is particularly important in a COL proceeding in which the application references a design certification application under review. As the Commission has explained:

With respect to a design for which certification has been requested but not yet granted, the Commission intends to follow its longstanding precedent that ‘licensing boards should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission.’ . . . In accordance with these decisions, a licensing board should treat the NRC’s docketing of a design certification application as the Commission’s determination that the design is the subject of a general rulemaking. We believe that a contention that raises an issue on a design matter addressed in the design certification application should be resolved in the design certification rulemaking proceeding, and not the COL proceeding. Accordingly, in a COL proceeding in which the application references a docketed design certification application, the licensing board should

refer such a contention to the staff for consideration in the design certification rulemaking, and hold that contention in abeyance, if it is otherwise admissible. Upon adoption of a final design certification rule, such a contention should be denied.

New Reactor Proceedings Policy Statement, 73 Fed. Reg. at 20,972 (citations omitted). In recent COL proceedings, the Commission has consistently affirmed the position it outlined in the Policy Statement and rejected challenges to those design aspects of a plant design being addressed in a pending rulemaking.⁵

4. Contentions Must Raise a Material Issue

Petitioners must further demonstrate “that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding.”⁶ 10 C.F.R. § 2.309(f)(1)(iv). Admissible contentions “must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application].” *Millstone*, CLI-01-24, 54 NRC at 359-60. The Commission has defined a “material” issue as one where “resolution of the dispute *would make a difference in the outcome of the licensing proceeding.*” Final Rule, 54 Fed. Reg. at 33,172 (emphasis added); *see also Oconee*, CLI-99-11, 49 NRC at 333-34.

⁵ *See South Carolina Electric and Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3) CLI-10-01, 71 NRC __ (slip op. at 10) (January 7, 2010); *Shearon Harris*, CLI-08-15, 68 NRC at 4; *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 68 NRC 1, 4 (2008); *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-13, 69 NRC 575, 576-77 (2009); *Detroit Edison Co.* (Enrico Fermi Atomic Power Plant, Unit 3), CLI-09-4, 69 NRC 80, 84-85 (2009).

⁶ The standards defining the findings that the NRC must make to support issuance of a COL in this proceeding are set forth in 10 C.F.R. § 52.97.

5. Contentions Must Be Supported by Adequate Factual Information or Expert Opinion

Each contention must also “[p]rovide a concise statement of the alleged facts or expert opinions which support [the petitioner’s] position on the issue and on which [the petitioner] intends to rely at hearing, together with references to the specific sources and documents on which [the petitioner] intends to rely to support its position in the issue.” 10 C.F.R. § 2.309(f)(1)(v). The petitioner bears the burden of coming forward with a sufficient factual basis “indicating that a further inquiry is appropriate.” *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 249 (1996) (citing Final Rule, 54 Fed. Reg. at 33,171 (requiring “some factual basis” for the contention)).

Under this standard, a petitioner is obligated “to provide the [technical] analyses and expert opinion” or other information “showing why its bases support its contention.” *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds*, CLI-95-10, 42 NRC 1, *aff’d in part*, CLI-95-12, 42 NRC 111 (1995). Where a petitioner has failed to do so, “the [Licensing] Board may not make factual inferences on [the] petitioner’s behalf.” *Id.* (citing *Palo Verde*, CLI-91-12, 34 NRC at 149); *see also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998) (a “bald assertion that a matter ought to be considered or that a factual dispute exists . . . is not sufficient;” rather, “a petitioner must provide documents or other factual information or expert opinion” to support a contention’s “proffered bases”) (citations omitted). A mere reference to documents does not provide an adequate basis for a contention. *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power

Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 348 (1998). A petitioner's failure to present the factual information or expert opinions necessary to support its contention adequately requires that the contention be rejected. *Yankee*, CLI-96-7, 43 NRC at 262-63; *Palo Verde*, CLI-91-12, 34 NRC at 155-56.

The Commission has made clear that conclusory statements, even when provided by an expert, are insufficient to demonstrate that further inquiry is appropriate. *USEC*, (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (“[A]n expert opinion that merely states a conclusion (e.g., the application is ‘deficient,’ ‘inadequate,’ or ‘wrong’) without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion” (footnote omitted)).

This requirement must be met at the outset. A contention is not to be admitted “where an intervenor has no facts to support its position and where the intervenor contemplates using discovery or cross-examination as a fishing expedition which might produce relevant supporting facts.” Final Rule, 54 Fed. Reg. at 33,171. The Rules of Practice bar contentions where petitioners have what amounts only to generalized suspicions, hoping to substantiate them later, or simply a desire for more time and more information in order to identify a genuine material dispute for litigation. *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 424 (2003).

6. Contentions Must Raise a Genuine Dispute of Material Law or Fact

Finally, each contention must “provide sufficient information to show that a genuine dispute exists with the applicant . . . on a material issue of law or fact.” 10

C.F.R. § 2.309(f)(1)(vi). The NRC’s pleading standards require a petitioner to read the pertinent portions of the combined license application and supporting documents, including the Final Safety Analysis Report (“FSAR”) and Environmental Report (“ER”), state the applicant’s position and the petitioner’s opposing view, and explain why it has a disagreement with the applicant. Final Rule, 54 Fed. Reg. at 33,171; *Millstone*, CLI-01-24, 54 NRC at 358. Contentions must be based on documents or other information available at the time the petition is filed. 10 C.F.R. § 2.309(f)(2). Indeed, a petitioner:

has an ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable the petitioner to uncover any information that could serve as the foundation for a specific contention. Neither Section 189a of the Atomic Energy Act nor [the corresponding Commission regulation] permits the filing of a vague, unparticularized contention, followed by an endeavor to flesh it out through discovery against the applicant or Staff.

Final Rule, 54 Fed. Reg. at 33,170 (quoting *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), ALAB-687, 16 NRC 460, 468 (1982), *vacated in part on other grounds*, CLI-83-19, 17 NRC 1041 (1983)). The obligation to make specific reference to relevant facility documentation applies with special force to an applicant’s FSAR and ER, and a contention should be rejected if it inaccurately describes an applicant’s proposed actions or ignores or misstates the content of the licensing documents. *See, e.g., Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1 and 2), LBP-82-119A, 16 NRC 2069, 2076 (1982); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), LBP-82-107A, 16 NRC 1791, 1804 (1982); *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1504-05 (1982).

If the petitioner does not believe that a licensing request and supporting documentation address a relevant issue, the petitioner is “to explain why the application is deficient.” Final Rule, 54 Fed. Reg. at 33,170; *see also Palo Verde*, CLI-91-12, 34 NRC at 156. A contention that does not directly controvert a position taken by the applicant in the license application is subject to dismissal. *See Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992). An allegation that some aspect of a license application is inadequate does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect. *Florida Power and Light Co.* (Turkey Point Nuclear Generating Plant, Unit Nos. 3 and 4), LBP-90-16, 31 NRC 509, 521 & n.12 (1990).

As set forth below, none of Petitioners’ Contentions complies with the Commission’s standards.

B. None of the Submitted Contentions is Admissible

The Petition advances nine contentions (some with several subparts) that challenge various aspects of the ER submitted by FPL as part of the Application. Petitioners’ contentions suffer from three fundamental defects, which are present to some extent or another in all of the contentions: (1) the failure to review the ER carefully (if at all), with the result that Petitioners claim that certain information has been omitted when in reality it is presented, sometimes at great length, in the ER; (2) the attempt to support alleged deficiencies in the ER by referencing comments, questions or concerns expressed by State agencies or local governments conducting (under State law requirements) a review of parallel applications submitted by FPL for necessary State and local approvals

and permits for Turkey Point Units 6 & 7; and (3) a failure to provide facts or expert opinion in support of their claims. These overarching deficiencies render all of Petitioners' contentions inadmissible and warrant that their Petition be rejected.

1. Contention NEPA 1 – Inadequate discussion of impacts to Biscayne Bay and the Biscayne Aquifer from the radial collector well system

The ER fails to adequately address direct, indirect, and cumulative impacts of the radial collector wells on the Biscayne Aquifer and the Biscayne Bay Ecosystem.

FPL Response

In Contention NEPA 1, Petitioners allege: “The ER fails to adequately address direct, indirect, and cumulative impacts of the radial collector wells on the Biscayne Aquifer and the Biscayne Bay Ecosystem.” Petition at 9.

Contention NEPA 1 is comprised of five sub-contentions. The common thread connecting Contentions 1.1 through 1.5 is Petitioners' concern that the operation of radial collector wells as a source of makeup water for Turkey Point Units 6 & 7 “may” have an adverse impact on the salinity of Biscayne Bay and the Biscayne aquifer. A crucial flaw of Contentions NEPA 1.1 through 1.5 is the lack of adequate support for this increased salinity claim. Without support for this assertion, none of the rest of the assertions in Contention NEPA 1 are viable.

The claims raised in Contention NEPA 1 also suffer from a number of additional flaws. *First*, Petitioners often attempt to demonstrate a dispute with FPL where none exists. Petitioners do this by mischaracterizing the ER, either by claiming the ER ignores a certain issue that it, in fact, discusses (*see* Petition at 23: “There is no discussion of the potential for the radial wells to disturb overlying benthic community . . . during

installation”; *see also* Petition at 15: “These alternatives [Card Sound Canal and Lower Floridan aquifer] and their associated impacts have not been considered”), or by misrepresenting statements in FPL’s ER (*see* Petition at 11: Turkey Point Units 6 & 7 would require “90 million gallons of reclaimed water a day”; *see also* Petition at 14 (“FPL assumes that the water withdrawn from the radial wells will be drawn only from the Aquifer”). Each of these claims and several others are shown to misrepresent the ER in the detailed discussion below. By misstating or ignoring the ER, Petitioners fail to demonstrate the existence of a genuine dispute with the application. 10 C.F.R. § 2.309(f)(1)(vi).

Second, Petitioners mainly advance speculative, hypothetical claims in Contention NEPA 1. Impacts “may” occur (*see, e.g.*, Petition at 13: “[R]adial collector wells may actually extract fresh water from the aquifer”). Effects “could” be felt (*see, e.g.*, Petition at 21: “[S]ensitive seagrasses could be significantly impacted by the loss of fresh water”). But NRC regulations do not allow petitioners to assert hypothetical environmental impacts as part of their contentions. Contentions must be based upon alleged facts or expert opinion, not mere conjecture. 10 C.F.R. § 2.309(f)(1)(v). Moreover, contentions must also demonstrate the existence of a genuine dispute with the applicant, not a hypothetical dispute, and must provide supporting reasons for that dispute. *See* 10 C.F.R. § 2.309(f)(1)(vi).

The National Environmental Policy Act (“NEPA”) requires federal agencies to take a “hard look” at the environmental impacts of a proposed action. *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998). This requirement is subject to a “rule of reason” such that the consideration of

environmental impacts “need not address every impact that could *possibly* result, but rather only those that are reasonably foreseeable or have some likelihood of occurring.” *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-09-07, 69 NRC 613, 631 (2009) (emphasis added) (citing *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)). If effects are remote or speculative, an EIS (and, by extension, an applicant’s ER) need not discuss them. See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.* 435 U.S. 519, 551 (1978). Thus, to be admissible, a claim that an ER fails to address (or fails to adequately address) an environmental issue must allege, and must provide some support for the assertion, that the environmental impact is significant and reasonably foreseeable. Citation of a merely hypothetical impact fails to raise a material issue. 10 C.F.R. § 2.309(f)(1)(iv).

Third, Petitioners consistently fail to point to specific portions of the ER that they dispute. See 10 C.F.R. § 2.309(f)(1)(vi). To support an admissible contention, Petitioners must state the applicant’s specific position and explain why they hold an opposing view. Final Rule, 54 Fed. Reg. at 33,171; *Millstone*, CLI-01-24, 54 NRC at 358.

Finally, throughout Contention NEPA 1 and its various sub-contentions, Petitioners cite to comments or concerns raised by state agencies and local governments as part of their review of FPL’s Site Certification Application (“SCA”) under Florida’s Power Plant Siting Act (“PPSA”) as support for the vast majority of its assertions. Instead of performing a thorough review of the ER and explaining why the contents of that document are deficient, Petitioners rely on the questions, comments, and concerns

raised as part of the review of FPL's SCA.⁷ Petitioners' references to these documents do not raise litigable issues in an NRC proceeding.

In addition, Petitioners fail to acknowledge the purpose and process involved in the SCA review. Because Petitioners rely so heavily on these SCA review documents, some explanation of the PPSA process is necessary to place the issue in context. The PPSA is the State of Florida's centralized process for obtaining necessary permits and approvals for construction and operation of new electrical power plants that culminates in a "state position" with respect to the site for an electrical power plant. Fla. Stat. § 403.502 (2010). The Site Certification combines and procedurally preempts state, regional, and local permits and approvals regarding the location, construction, and operation of the electrical power plant and any "associated facility," including, among other things, pipelines, roads, railway lines, and electrical transmission lines. Fla. Stat. § 403.511(1) (2010). The Florida Department of Environmental Protection ("DEP") administers and oversees the processing of the certification application under the PPSA. Fla. Stat. § 403.504 (2010). Affected agencies (such as the relevant water management districts, local governments, and regional planning council, as well as the Florida Fish and Wildlife Conservation Commission) are required to prepare agency reports on the project for submittal to DEP. The agency reports include, among other things, a recommendation for approval or denial of the SCA along with any recommended conditions of certification. Fla. Stat. § 403.507(3)(b) (2010).

⁷ In fact, in Contention NEPA 1 alone, Petitioners cite over forty times to "Completeness Comments" by Miami-Dade County and "Completeness Determinations" by the DEP. It hardly needs pointing out that comments, or even concerns, raised by other government entities while reviewing a different document than the ER under different legal standards do not provide support for a contention in an NRC proceeding and, in themselves, fail to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(v).

Prior to submittal of an agency report, the affected agency provides a recommendation regarding completeness to DEP.⁸ Fla. Stat. §§ 403.5066(1)(a), 403.5252(1) (2010). The PPSA, however, gives DEP alone the power and duty to determine the completeness of the SCA. Fla. Stat. § 403.504(3) (2010). Thus, under the PPSA, DEP makes the ultimate determination as to whether the SCA is complete; agencies only make recommendations on completeness. Accordingly, when an agency recommends that the SCA is incomplete and submits “completeness comments,” it is indicating that it does not have enough information to prepare its agency report (i.e., does not have enough information to recommend approval or disapproval). A “completeness comment” is not (and cannot be) a statement of the agency’s position as to whether the SCA should be approved since an agency admittedly does not have adequate information to fully evaluate the application; the agency’s formal recommendation as to approval or disapproval of the SCA comes later in its agency report, once its completeness comments have been resolved. Fla. Stat. §§ 403.507(3)(b), 403.526(2)(b) (2010).

After DEP determines the SCA complete, it must prepare a separate project analysis report, which includes, among other things, its “recommendation” as to disposition of the SCA. Fla. Stat. §§ 403.507(5)(d), 403.526(3)(d) (2010). After an opportunity for hearing, the final determination as to whether an application for site certification should be approved or denied is made by Florida’s Governor and Cabinet sitting as the Siting Board. Fla. Stat. § 403.509(3) (2010).

⁸ Under the PPSA, completeness “means that the application has addressed all applicable sections of the prescribed application format, and that those sections are sufficient in comprehensiveness of data or in quality of information provided to allow the department to determine whether the application provides the reviewing agencies adequate information to prepare [agency reports].” Fla. Stat. § 403.503(10) (2010).

Given this multi-step PPSA process, a reviewing agency's completeness comments cannot be considered a statement of that agency's position on a project. The agency's recommendation as to approval or disapproval will ultimately be made in its agency report. Indeed, in most instances the comments are in the nature of questions to the applicant seeking additional information as to some area of the SCA.

SCA completeness comments are akin to NRC Staff Requests for Additional Information ("RAIs"), which, as a general rule, are not sufficient to support an admissible contention. *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant Units 1 and 2), LBP-09-10, 70 NRC 51, 144 (2009) (citing *Nuclear Mgmt. Co., LLC* (Monticello Nuclear Generating Plant), CLI-06-06, 63 NRC 161, 164 (2006) The Commission explained this concept in the *Oconee* license renewal proceeding:

The petitioners themselves provided no analysis, discussion, or information of their own on any of the issues raised in the RAIs -- which, we note, cover a wide variety of disparate subject matters, such as door locking mechanisms and the Oconee coatings program. At bottom, the RAIs show only an ongoing staff dialogue with Duke Energy, not any ultimate staff determinations. Apart from a broad reference to these follow-up questions posed by the staff, the petitioners did not posit any reason or support of their own -- no alleged facts and no expert opinions -- to indicate that the application is materially deficient. Petitioners seeking to litigate contentions must do more than attach a list of RAIs and declare an application "incomplete." It is their job to review the application and to identify *what* deficiencies exist and to explain *why* the deficiencies raise material safety concerns.

Oconee, CLI-99-11, 49 NRC at 337.

The reasoning behind this principle is even more applicable to comments made by agencies other than the NRC when reviewing a different application against a different regulatory standard. The PPSA completeness comments are not based, in any way, on a

review of the ER or a determination as to whether FPL’s ER contains sufficient evaluation of reasonably foreseeable environmental impacts. They are based on the state agencies’ review of the SCA against substantive State environmental laws.⁹ However, in order to show that they are entitled to a hearing at the NRC, Petitioners must demonstrate “that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding.” 10 C.F.R. § 2.309(f)(1)(iv). Petitioners must review the ER and identify what deficiencies exist and explain why those deficiencies are material. The State agencies’ assertions that FPL has not provided them with the information necessary to comply with *the State’s* requirements have no bearing on whether FPL has provided sufficient information in its ER for the NRC Staff to prepare an Environmental Impact Statement (“EIS”). Petitioners fail to explain how the in-depth state agency reviews of FPL’s SCA provide any indication that FPL’s ER is inadequate, and fail as well to acknowledge the differences in the applications being reviewed or the regulatory standards being applied in the State and NRC proceedings.

Notably, most of the cited completeness comments do not make assertions as to the existence of deficiencies in FPL’s SCA, but merely present potential, hypothetical environmental impacts and ask FPL to address them. For instance, Petitioners cite to certain Miami-Dade County’s Comments to support their claim that “[t]here is the

⁹ The ER identifies some of the stringent Florida regulations with which FPL must comply for Units 6 & 7. ER at 2.3-40 – 2.3-41. For instance, Biscayne National Park is designated as an Outstanding Florida Water and an Outstanding National Resource Water pursuant to Rule 62-302.700 of Florida Administrative Code (F.A.C.). *Id.* at 2.3-40. As a result, any discharges or activities that may cause degradation of water quality and natural resources are generally prohibited except under specified circumstances. *Id.* Further, the Biscayne Bay Aquatic Preserve is managed by the Florida DEP in accordance with F.S. 258.397 and F.A.C. 18-18 and activities such as dredging, filling, drilling of wells, and erection of structures are regulated to preserve water quality and aquatic resources. *Id.* at 2.3-41. Finally, Miami-Dade County zoning resolutions prevent FPL from withdrawing water from the Biscayne aquifer as a source of cooling water and require FPL to use reclaimed or reuse water to the maximum extent possible. *Id.*

potential for this [fresher water] lens to be drawn into the proposed radial collector wells during pumping.” See Petition at 14. However, the cited request for additional information takes no position on whether this fresher water lens would be drawn into the wells. Instead, it states: “Please provide information on the extent of this fresher water lens and *the degree to which it would be drawn* into the proposed radial collector wells during pumping.” Miami-Dade County Third Completeness Comments for Plant and Non-Transmission Line Portions of the FPL Site Certification Application – Turkey Point Units 6 & 7 (May 28, 2010) (“MDC Third Completeness Comments”) at 20 (emphasis added).¹⁰ Even the opinion of a qualified expert is not sufficient to support a contention if the opinion lacks a reasoned basis or explanation. *USEC, CLI-06-10*, 63 NRC at 472. Where, as is the case with most completeness comments, there is no identified expert witness and there is not even an opinion on the existence of the cited condition or impact, the comment has even less probative value for the purpose of contention admissibility.

As with an NRC RAI, these comments must be accompanied by actual allegations of fact or expert opinion explaining how the questions demonstrate the ER’s non-compliance with Part 51 in order to form the basis of an admissible contention. See *Oconee, CLI-99-11*, 49 NRC at 336-37. However, throughout Contention NEPA 1, Petitioners merely refer to the comments as if they provided evidence of their claims.

¹⁰ Boards are not to accept uncritically assertions that a document or other factual information or an expert opinion supplies the basis for a contention. *Private Fuel Storage*, LBP-98-7, 47 NRC at 181. Instead, the Board “should review the information provided to ensure that it does indeed supply a basis for the contention.” *Id.* (citing *Vermont 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-90-4, 31 NRC 333 (1990); *Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2)*, CLI-89-3, 29 NRC 234, 241 (1989).

Petitioners' reliance on this tactic has resulted in a contention that, while lengthy, is without adequate support. 10 C.F.R. § 2.309(f)(1)(v).

2. Contention NEPA 1.1 - Insufficient data on the water to be withdrawn by the radial collector well system to the Biscayne Bay ecosystem

The ER provides insufficient data to aid the Commission in assessing the impacts of the radial collector well system to the Biscayne Bay ecosystem due to the ER's failure to specify the frequency and amount of water the radial collector wells will withdraw from the Biscayne Aquifer.

FPL Response

Contention NEPA 1.1, on its face, is a contention of omission. Petitioners claim that the ER is deficient because it fails to specify the amount of water that FPL will withdraw from the aquifer beneath Biscayne Bay for use as cooling water for Turkey Point Units 6 & 7. Petition at 10. As set forth below, Contention NEPA 1.1 is inadmissible because it fails to raise a genuine dispute with the Application and fails to provide the requisite factual support. 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

(i) Petitioners' Claim That FPL Failed to Specify the Amount of Water to be Withdrawn by Radial Collector Wells is Unsupported by Fact or Expert Opinion and Fails to Demonstrate the Existence of a Genuine Dispute with the ER

The Application explains that the primary source of makeup water for the circulating water cooling towers at Turkey Point Units 6 & 7 would be reclaimed water supplied by the Miami-Dade Water and Sewer District ("MDWASD") South District Wastewater Treatment Plant ("SDWWTP"), which is located approximately 9 miles north of the Turkey Point plant property. ER at 2.3-42. When reclaimed water cannot supply the quantity and/or quality of water needed for the circulating water system, radial

collector wells supplying saltwater would be used to supplement the supply. *Id.* In Contention NEPA 1.1, Petitioners correctly state that FPL “cannot identify the ratio of water supplied by the two water sources because it would vary depending on the availability of reclaimed water from the MDWASD.” Petition at 11 (citing ER at 2.3-42). Petitioners also correctly note that the actual amount of water needed from the radial collector wells “would depend on the quality and quantity of reclaimed water available from MDWASD.” Petition at 11 (citing ER at 2.3-45 and 5.2-8).

Petitioners argue that the ER fails to “explain what constitutes a ‘sufficient’ quantity or quality of reclaimed water, nor does it indicate whether there actually is a written commitment by MDWASD to reserve 90 million gallons of reclaimed water a day or whether MDWASD has the capability to do so.” *Id.* According to Petitioners, without this information on the amount of water that will be withdrawn and how often it will be withdrawn, “FPL cannot provide the Commission with adequate information to assess the radial well’s [*sic*] impacts to the Biscayne Bay ecosystem or whether there are other reasonable alternatives.” *Id.*

Each of these assertions is incorrect and reflects Petitioners’ failure to adequately examine the application. In fact, Petitioners provide no reference to, or discussion of, the ER’s extensive consideration of the availability of the reclaimed water.

The ER states that, in 2006, the MDWASD disposed of “295 mgd [million gallons per day] of wastewater by deep well injection and surface water discharge to offshore locations.” ER at 5.2-16. Of this 295 mgd, only 18 mgd were treated and reused. *Id.* The ER explains that this arrangement must change over the next decade for two reasons. *Id.* First, the State of Florida recently enacted legislation eliminating the

option of ocean outfalls for wastewater treatment effluent disposal. *Id.* Second, Condition 39 of the South Florida Water Management District (“SFWMD”) water use permit for the Miami-Dade consolidated public water supply requires MDWASD to implement 170 mgd of reuse projects. *Id.* Exhibit 30 of the water use permit identifies specific reuse projects, including 89.1 mgd for the Biscayne Bay Coastal Wetlands Project, a component of the Comprehensive Everglades Restoration Plan. *Id.*

The water use permit also requires MDWASD to “work with FPL” to provide up to 70 mgd to FPL for nuclear projects and 14 mgd for use by FPL fossil-powered plants in addition to the 170 mgd for other specified projects. *Id.* The ER acknowledges that FPL’s claim to MDWASD water may be impacted by other demands for that water:

If the largest reuse projects listed in the exhibit are met as projected, reclaimed water from the SDWWTP [South Dade Waste Water Treatment Plant] may not be sufficient to meet all of the water demand for the operation of Units 6 & 7. To compensate for this potential shortfall, a second source for makeup water would consist of radial collector wells that would withdraw saltwater from under Biscayne Bay.

Id. Contrary to Petitioners’ assertions, FPL’s ER clearly describes MDWASD’s regulatory commitment to providing reclaimed water for Turkey Point Units 6 & 7, and explains the contingencies related to that commitment. Petitioners ignore this discussion in the ER.

Because of the potential of insufficient reclaimed water to serve all of the competing demand, as well as the potential for challenges in meeting water quality requirements, the ER explains that radial collector wells supplying saltwater would be used to supplement the supply. ER at 2.3-42. The plant’s raw water system would be able to supply 100 percent of the makeup water from either reclaimed water or saltwater,

or any combination of both, with reclaimed water serving as the primary supply. *Id.* The ratio of water supplied by the two makeup water sources would therefore vary depending on the availability of reclaimed water from MDWASD. *Id.* The circulating water system would be designed to accommodate the differing water quality of the two sources. *Id.*

The radial collector wells would be designed and located so as to induce infiltration from Biscayne Bay. *Id.* at 2.3-46. Four radial collector wells, each capable of producing approximately 45 million gallons per day, would be installed. *Id.* FPL estimates the total makeup flow required from the radial collector wells to be 86,400 gallons per minute (“gpm”), or 43,200 gpm per unit. *Id.* at 2.3-45 and 3.4-3. However, because reclaimed water from the MDWASD would be the primary and preferred source of cooling water for Turkey Point Units 6 & 7, the ER explains that the actual amount of saltwater used would depend on the quality and quantity of reclaimed water available from the MDWASD. *Id.* While the ratio of water supplied by the two makeup water sources would vary based on the availability of reclaimed water from the MDWASD, the total need for makeup water from the radial collector wells would be within the flow rates identified above. *Id.* at 3.4-3.

While FPL cannot predict exactly how much water it would need to withdraw from the radial collector wells at any one time, the ER provides a conservative, bounding value for the maximum expected flow rates from the radial collector wells of 43,200 gpm per unit. *See id.* at 2.3-45; 3.4-3. In other words, the bounding analysis in the ER assumes that *no* reclaimed water is provided by the MDWASD. As the Commission has stated, NEPA “does not call for certainty or precision, but an *estimate* of anticipated (not

unduly speculative) impacts.” *Louisiana Energy Services* (National Enrichment Facility) CLI-05-20, 62 NRC 523, 536 (2005) (emphasis in original). FPL’s ER appropriately provides a conservative estimate, indicating a high bounding value, but stating that the expected amount of water would be significantly lower. Petitioners do not contest that this estimated flow is bounding.

Petitioners have a duty to read the ER, state in their contention FPL’s position, and state their opposing view. *See Millstone*, CLI-01-24, 54 NRC at 358. Instead, Petitioners ignore the ER’s discussion of the radial collector wells serving as a backup water supply and the bounding evaluation that assumes 100 percent of the plant’s makeup water needs are met by the water from the radial collector wells. Thus, Petitioners’ claim fails to raise a genuine dispute on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(vi).

Further, Petitioners’ claim that FPL is required to include in its ER a written commitment on the part of MDWASD to reserve 90 million gallons is equally misguided. *See* Petition at 11, 15. Petitioners do not identify the source for their assertion that “90 million gallons of reclaimed water a day” would be required, but that value is 50% greater than the amount discussed in FPL’s ER. *See* ER at 5.2-16 (“Reclaimed water from the SDWWTP would supply approximately 60 mgd for the operation of Units 6 & 7”); *see also* ER at 3.4-2; FSAR at 2.4.1-2. A larger amount of water (approximately 124 mgd) would be required when operating completely from water supplied by the radial collector wells. ER at 5.2-17. Petitioners assertion of 90 mgd of reclaimed water demand is incorrect, unsupported, and demonstrates that Petitioners failed to perform an

adequate review of the ER as is necessary to demonstrate a genuine dispute with the Application. *See* 10 C.F.R. § 2.309(f)(1)(vi).

Moreover, Petitioners' claim that the "ER does not explain what constitutes a 'sufficient' quantity" of reclaimed water is without merit. *See* Petition at 11. The ER plainly states that 60 mgd of reclaimed water would be required. ER at 5.2-16. And contrary to Petitioners claims, the ER also describes the quality of the water that would be required. As is explained in Chapter 3 of the ER, the use of reclaimed water in industrial cooling towers is regulated under DEP rules 62-610, Part VII, Florida Administrative Code ("F.A.C.") and the Turkey Point Units 6 & 7 cooling towers will comply with those rules. ER at 3.3-1; 3.4-5. In accordance with DEP regulations (62-F.A.C. 610.668), the MDWASD would be required to provide high-level disinfection of reclaimed water before industrial use by FPL in open cooling towers. *Id.* If the MDWASD is unable to meet DEP regulatory requirements at any point during the operation of Turkey Point Units 6 & 7, or could do so for only a limited volume of water, FPL would need to rely on saltwater provided by the radial collector wells.

Lastly, Petitioners fail to identify any reason why a written commitment from the MDWASD to provide reclaimed water must be included in the ER. *See* Petition at 11, 15. FPL expects its plan to use reclaimed water from the MDWASD will be realized. But the ER's bounding analysis already accounts for the possibility that the MDWASD may ultimately be unable to supply any reclaimed water for Turkey Point Units 6 & 7.¹¹

¹¹ In fact, FPL and the MDWASD have recently entered into a Joint Participation Agreement, which further defines the MDWASD's commitment to provide reclaimed water for use by Turkey Point Units 6 & 7.

(ii) Petitioners' Claim That the ER Misrepresents the Salinity of Biscayne Bay and the Biscayne Aquifer is Unsupported by Fact or Expert Opinion and Fails to Demonstrate the Existence of a Genuine Dispute With the ER

Petitioners also assert that FPL's ER misrepresents the salinity of both Biscayne Bay and the Biscayne aquifer. Petition at 12. Petitioners claim that the radial collector wells have a "potential" to impact the salinity regime of the Bay, but "there is no discussion in the ER of the radial well's [*sic*] potential impacts to the salinity regime of the Bay". Petition at 12. However, FPL's ER states:

Operation of radial collector wells installed beneath Biscayne Bay would not impact the water quality of the bay. Although recharge would occur from the bay, it is estimated to be a small percentage of *natural freshwater recharge*. *Effects on salinity of the bay, based on the predicted amount of withdrawal versus the natural recharge, would be minimal.*

Monitoring wells would be installed and used to monitor the groundwater level and water quality at and near the radial collector well locations to ensure impacts to local water quality, particular surface water quality, are minimal.

ER at 5.2-21 (emphases added). The ER acknowledges that operation of the radial collector wells will have some effect on the salinity of the Bay, but concludes that the effect would be minimal due to the much larger amount of natural freshwater recharge to the Bay. As a result, Petitioners' claim that there is "no discussion" of the potential impacts to Bay salinity is simply mistaken.

Petitioners next assert, without citation, that "FPL assumes that both Biscayne Bay and the Biscayne Aquifer are saline." Petition at 12. According to Petitioners:

Neither the Bay nor the Aquifer, however, is at a constant salinity. While there is a semi-diurnal tidal phase in Biscayne Bay that is influenced by the ocean, the water that

resides in Biscayne Bay in any one basin at any one time is greatly affected by groundwater inflow from the bay bottom and tributary discharges, wind patterns, and other variables. Salinities are typically lower for instance during the wet season.

Id. (citing Petition Exhibit 2 at 5). In fact, Petitioners argue, “Biscayne Bay can best be described as a system with temporal and spatial variations in salinity and the ecosystem is extremely sensitive to the changes and timing of salinity.” *Id.* (citing MDC Third Completeness Comments (Petition Exhibit 3) at 25 and G. Lynn Wingard, *Application of Paleologic Methods to Coastal Resource Management: An Example from Biscayne National Park, Geodiversity and Geoconservation*, vol. 22, no. 3, at 19 (2005) (“Wingard”) (Petition Exhibit 4)). Petitioners also claim that the Biscayne aquifer experiences similar “temporal and spatial variations.” *Id.* at 13.

But as Petitioners acknowledge (*see* Petition at 13), the ER notes that salinities vary widely in Biscayne Bay. *See* ER at 2.3-8; 2.4-18; Table 2.3-31. For instance, the ER explains:

Monthly mean salinities vary widely over Biscayne Bay, ranging from a low of approximately 6 parts per thousand (ppt) to a high of 42 ppt, depending on the amount of rainfall and surface drainage reaching the coastal zone (Caccia and Boyer 2005). The bay is shallow and well mixed with only a weak salinity-based density gradient generated by the freshwater discharge from the canals on the western side. Salinity in the bay is affected by the pronounced wet-dry seasonal dynamics and is highest in June when rainfall is low and evaporation is high (BNP 2008b, Caccia and Boyer 2005).

ER at 2.3-8. Accordingly, FPL’s ER identifies the very “temporal and spatial variations” in the salinity of Biscayne Bay that Petitioners claim has not been discussed.

Also, contrary to Petitioners' assertion (Petition at 12), FPL's ER does not describe the Biscayne aquifer as having a consistent salinity regime. The ER explains that, while the Biscayne aquifer is generally classified as drinking-water quality, the portion underlying the Turkey Point Units 6 & 7 plant area contains "saline to saltwater" and is not usable as a potable water supply. ER at 2.3-14. Thus, the ER notes that the salinity of the aquifer varies from "saline" to "saltwater."

More generally, the ER explains that "[b]ecause of the [Biscayne] aquifer's high permeability, and in response to the lowering of inland groundwater levels due to pumpage, saltwater has migrated inland along the base of the aquifer and affects the entire coastal zone." ER at 2.3-17. This saltwater, according to the ER, "moves inland and upward in response to low inland groundwater levels and moves seaward and downward in response to high inland groundwater levels." *Id.* As a result, use of groundwater from the Biscayne aquifer in the immediate vicinity of the plant area is limited due to its "saline to saltwater composition." *Id.* FPL's ER identifies the "temporal and spatial variations" in the salinity of the Biscayne aquifer about which Petitioners are concerned.

It appears that, when Petitioners claim "FPL assumes that both Biscayne Bay and the Biscayne aquifer are saline," they may not intend to challenge (as they do not appear to have reviewed) the ER's narrative discussion of the salinity regime in Biscayne Bay and the Biscayne aquifer. *See* Petition at 12. Instead, they appear to challenge a constant-density assumption that was used in FPL's steady-state groundwater model. The issues raised relating to that model are discussed in greater detail in the response to

Contention NEPA 1.2 below, but are discussed herein as they relate to Contention NEPA 1.1.

The constant-density assumption of the groundwater model does not represent the ER's qualitative description of the salinity regime of those water bodies. The ER describes the salinity regime in the narrative portion of the ER, as is discussed in the preceding paragraphs. The constant-density assumption is simply an input for a model that sought to "simulate the localized effects of construction dewatering, construction of Turkey Point Units 6 & 7 (site grade increase and use of diaphragm walls for groundwater control), and operation of the radial collector wells." FSAR § 2.4.12, Appendix 2CC "Groundwater Model Development and Analysis" at 2CC-7. As Petitioners acknowledge, the purpose of the model, with respect to the radial collector wells, was to determine the source of the water that would be collected and the velocity of the water as it recharged the aquifer. *See* Petition at 18.

In preparing the groundwater model, FPL recognized that the water in the localized area of interest was not likely to be of a constant density (water density is a function of salinity and temperature). *See* FSAR § 2.4.12, Appendix 2CC at 2CC-26. But, for the limited purposes of the model (evaluating the zone of influence of the radial collector wells and the approach velocity of the water), FPL concluded that the density variations would be insignificant compared to the hydraulic gradient caused by the pumping. *Id.* Because the density (and therefore salinity) of the water would not be a necessary input to evaluate the zone of influence of the radial collector wells, FPL determined that a constant-density model would be appropriate and chose seawater as the

reference fluid. *Id.* Petitioners do not dispute, or even cite to, the explanation for these assumptions that FPL provided in FSAR § 2.4.12 Appendix 2CC at 2CC-26.

FPL's ER provides a qualitative discussion of the salinity regime of Biscayne Bay and the Biscayne aquifer that is consistent with Petitioners' claim of salinity variability.¹² But Petitioners ignore this discussion and appear to assert that an assumption for a model somehow represents the ER's description of the local salinity regime. This assertion is unsupported and inconsistent with the ER. In addition, as discussed in the response to Contention NEPA 1.2, Petitioners fail to demonstrate why the constant-density modeling assumption raises a material issue. 10 C.F.R. § 2.309(f)(1)(iv).

(iii) Petitioners' Claim Regarding the Extraction of Fresh Water is Unsupported by Fact or Expert Opinion and Fails to Demonstrate the Existence of a Genuine Dispute With the ER

Petitioners next allege that because FPL's ER fails to recognize the potential for freshwater to be found in the Biscayne aquifer, it also fails to recognize that freshwater may be withdrawn from the radial collector wells. Petition at 13. According to Petitioners, if both the Aquifer and the Bay have variable salinities, FPL's assumptions

¹² The ER's determination that the "[e]ffects on salinity of the bay, based on the predicted amount of withdrawal versus the natural recharge, would be minimal" (ER at 5.2-21), is consistent with the findings of a formal salinity impact analysis that FPL included with its SCA. While it is not discussed in the ER, Petitioners provided a general discussion of this analysis in Petition Exhibit 23, "FPL Third Round Plant and Non-Transmission Completeness Responses, FPL-Turkey Point Units 6 & 7 Certification Application, (July 2010)" at 7-10:

The salinity impact analysis shows that operation of the radial collector wells will have no significant adverse impact on the average salinity in the Bay. Salinity changes attributable to the radial collector wells (changes that are calculable, but not likely measureable), tend to moderate the extreme salinity variations. Because the radial collector wells reduce the salinity extremes, they tend to move the system back toward the more natural salinity condition that existed before development.

Petition Exhibit 23 at 8. This discussion underscores the fact that the ER and the SCA are distinct applications and a criticism of one need not necessarily apply to the other.

about the salinity of the water being withdrawn from the radial wells and about the impact to the Bay ecosystem would be undermined. *Id.*

Petitioners cite to a DEP Completeness Determination for FPL's SCA, which stated that "this process may actually extract fresh water from the aquifer." DEP Determination of Completeness, FPL Turkey Point Units 6 & 7, at 2 (August 10, 2009) ("DEP First Completeness Determination") (Petition Exhibit 5). In asking whether fresh water would be withdrawn by the radial collector wells, DEP did not reach a formal determination or address whether such a withdrawal is reasonably foreseeable. It simply raised the issue as a question it wanted to have addressed as part of its review of the SCA. Therefore, Petitioners' citation to the DEP's First Completeness Determination does not constitute the provision of facts or expert opinion required to adequately support a contention, in violation of 10 C.F.R. § 2.309(f)(1)(v).

In addition, FPL acknowledged in the ER that the operation of the radial collector wells could impact the Biscayne aquifer and Biscayne Bay, but made plain that it would comply with applicable permit requirements. *See* ER at 10.1-10. Therefore, contrary to Petitioners' allegation, FPL's ER does recognize that freshwater may be withdrawn from the radial collector wells. Petitioners' claim does not raise a dispute with the Application on a material issue of fact, in contravention of 10 C.F.R. § 2.309(f)(1)(vi).

(iv) Petitioners' Claim Regarding the Existence of a Fresher Water Lens is Unsupported by Fact or Expert Opinion and Fails to Demonstrate the Existence of a Genuine Dispute With the ER

Petitioners argue that "FPL assumes that the water withdrawn from the radial wells will be drawn only from the Aquifer." Petition at 14. This is a misrepresentation of FPL's ER, which clearly states that the radial collector wells will draw water from

Biscayne Bay. *See* ER at 5.2-23 (“the radial collector wells would be recharged at a rate ranging from 92 to 100 percent (114 mgd to 124 mgd) from Biscayne Bay”). The remaining recharge would be from groundwater beneath the plant property. *Id.* at 5.2-9 and 5.2-17.

On the other hand, Petitioners’ argue that the radial collector wells may draw from a “fresher water lens” in Biscayne Bay. Petition at 14. Petitioners provide no support for this assertion, other than saying that there is the “potential” for the radial collector wells to recharge from this fresher water lens; that such an occurrence “would likely” impact the salinity of the Bay; and that Miami-Dade County is concerned about the “possibility” of this occurrence.¹³ *Id.* (citing Petition Exhibit 3). Petitioners’ chain of speculation as to the potential that a lens of fresher water in the Bay may be drawn into the radial collector wells and the consequences of such an event is not based on either fact or expert opinion. 10 C.F.R. § 2.309(f)(1)(v).

(v) Petitioners’ Claim That FPL Failed to Address Alternative Cooling Sources is Unsupported by Fact or Expert Opinion and Fails to Demonstrate the Existence of a Genuine Dispute With the ER

Finally, Petitioners argue that the uncertainty regarding the MDWASD’s ability to provide 90 mgd of reclaimed water, an erroneous and unfounded value, as explained above, “casts serious doubt upon FPL’s assertions that the radial collector wells will be a

¹³ Petitioners misrepresent the County’s completeness comment. While Petitioners assert the existence of a lens in “[t]he Bay,” the County’s question referred to a discussion of a “lens of fresher *groundwater*.” MDC Third Completeness Comments at 20 (emphasis added). Further, contrary to Petitioners’ implication, the County’s completeness comment just included a request to: “please provide information on the extent of this fresher water lens and *the degree to which* it would be drawn into the proposed radial collector wells during pumping.” *See id.* (emphasis added). In the cited document, Miami-Dade County did not opine on the likelihood of this fresher water being drawn into the radial collector wells. It simply asked a question in its attempt to reach such an opinion. *Id.*

feasible, secondary source of cooling water.” Petition at 15. There is no relationship, however, between the MDWASD’s ability to provide reclaimed water and whether the radial collector wells would be feasible as a secondary supply.

According to Petitioners, the potential inability to rely on the radial collector wells would require an assessment of alternative sources of cooling water, specifically “surface water intake from a canal connected to Card Sound, wells in the upper and/or lower Floridan Aquifer, and potentially other sources.” *Id.* Petitioners claim that, “these alternatives and their associated impacts have not been considered in the ER.” *Id.* Once again, Petitioners’ claim demonstrates their complete failure to fulfill their “ironclad obligation” to review the ER. *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 386 (2002). Even a cursory review of Chapter 9, “Alternatives to the Proposed Action,” would make plain that the ER did, in fact, evaluate the impacts of both a canal connected to Card Sound and the Boulder Zone (Lower Floridan aquifer) as alternative water supplies.

In Section 9.4.2.3, “Water Supply,” FPL’s ER identifies both the Card Sound Canal and the Boulder Zone of the Lower Floridan aquifer as potential alternatives.¹⁴ ER at 9.4-18 - 9.4-19. FPL performed a screening analysis of the potential water supply system alternatives to identify the feasible water supply alternatives and determined that both the Card Sound Canal and the Boulder Zone were feasible alternatives. *Id.* at 9.4-21. FPL then provided a comparison of the environmental impacts of these feasible

¹⁴ FPL also evaluated several other potential alternative water supplies, including: Biscayne Bay, Card Sound, the Atlantic Ocean, the turning basin, the Biscayne aquifer, the Upper Floridan aquifer, the cooling canals, deepened cooling canals, waters associated with the Comprehensive Everglades Restoration Plan, and a private property reservoir. ER at 9.4-17 - 9.4-21. Each of these alternatives was determined to not be feasible. *Id.* at 9.4-21.

alternatives with the impacts associated with the radial collector wells and the use of reclaimed water. ER Table 9.4-4.¹⁵

Petitioners' assertion that FPL failed to evaluate alternative water supplies, such as the Card Sound Canal and the Lower Floridan aquifer, is therefore incorrect.

3. Contention NEPA 1.2 - ER's failure to provide sufficient aquifer testing and groundwater modeling to support the ER's conclusions

The ER provides insufficient data to aid the Commission in assessing the impacts of the radial collector well system on the Biscayne Bay ecosystem due to the ER's failure to provide sufficient aquifer testing and groundwater modeling to support the ER's conclusions.

FPL Response

In Contention NEPA 1.2, Petitioners challenge: (a) an aquifer performance test ("APT"); and (b) a groundwater model. Both challenges are based on comments made by Miami-Dade County as part of its review of the SCA. Petition at 15-20 (citing Petition Exhibit 3 at 21-26). Petitioners argue that the failings of the test and the model asserted by the County disprove FPL's conclusion that operation of the radial collector wells "will not have adverse impacts to the Biscayne Aquifer and Biscayne Bay." Petition at 18; *see also id.* at 15.

At the outset, Contention NEPA 1.2 misrepresents the ER's impact determination. Instead of claiming that the radial collector wells would have no adverse impacts, the ER states that "[i]mpacts to Biscayne Bay surface waters [from operation of the radial collector wells] would be SMALL." ER at 5.2-17. The ER also states that "[i]mpacts to

¹⁵ The ER also includes a similar analysis of alternative water intake designs, again considering both the Card Sound Canal and the Boulder Zone. *See* ER at 9.4-8 – 9.4-9; Table 9.4-2.

groundwater use from the operations of the radial collector wells as a cooling water makeup source would be SMALL” (*id.* at 5.2-19), and “[e]ffects on salinity of the bay . . . would be minimal.” ER at 5.2-21. Far from claiming, as Petitioners assert, that the operation of the wells would have no adverse impacts on the Bay and the aquifer, the ER acknowledges that the wells will have some impact, but concludes that the impacts would be small or minimal. By failing to accurately describe the impact determinations in the ER, or even cite to them, Petitioners fail to demonstrate a genuine dispute with the application. 10 C.F.R. § 2.309(f)(1)(vi). If Petitioners disagreed with the ER’s characterization of those impacts as small, they need to have stated so in their petition.

4. Contention NEPA 1.2 (a) - Lack of sufficient testing of the Biscayne Aquifer

There is a lack of sufficient testing of the Biscayne Aquifer to determine the potential impacts to the Biscayne Aquifer and Biscayne Bay ecosystem.

FPL Response

Contention NEPA 1.2’s challenge to the radial collector well testing is totally unfounded. The first test Petitioners challenge, the APT, is not a part of FPL’s ER. In fact, the APT was performed in April and May of 2009 and the report summarizing it was not completed until August of that year. *See* Petition Exhibit 3 at 21 (identifying the August 19, 2009 “HDR Report”); *see also* Petition Exhibit 23 at 63. The Application was filed in June 2009. Accordingly, the Application does not reference or rely upon the APT, which therefore could not have had any bearing on the conclusions reached in the ER regarding the salinity effects of radial collector well operation.¹⁶ The sole citation to

¹⁶ FPL provided the HDR Report in October 2009 as part of its response to DEP’s First Completeness Determination. *See* MDC Third Completeness Comments at 21.

the ER in Contention NEPA 1.2(a), “*see also* ER at 2.3-25,” is obviously incorrect and fails to demonstrate the existence of a genuine dispute with the ER on a material issue of law or fact.¹⁷ Petition at 16; 10 C.F.R. § 2.309(f)(1)(vi). Petitioners have reviewed the County’s completeness comments, but have failed to tie the County’s comments to the ER’s discussion of environmental impacts. Accordingly, Contention NEPA 1.2(a) fails to demonstrate the existence of a genuine dispute with the application. 10 C.F.R. § 2.309(f)(1)(vi).

5. Contention NEPA 1.2 (b) - Lack of sufficient groundwater modeling

There is a lack of sufficient groundwater modeling to determine the potential impacts to the Biscayne Aquifer Biscayne Bay ecosystem.

FPL Response

Unlike the APT, the groundwater model is referenced and relied upon in the ER. Petitioners challenge the constant-density assumption used in the groundwater model, argue that it fails to account for preferential flow zones, improperly relies on average data from the beginning of the wet and dry seasons, and fails to account for the Bay’s sensitivity to changes and timing of salinity.¹⁸ Petition at 19 (citing Petition Exhibit 3 at

¹⁷ On pages 2.3-24 and 2.3-25, the ER describes a series of pumping tests that had been performed in the general area around the plant property in previous years by other parties—*not the 2009 APT*. The ER does describe four aquifer pumping tests that were conducted in the Units 6 & 7 power block area (i.e., the reactor footprint). ER at 2.3-27. These tests were performed “to measure the hydrogeologic properties of the aquifer units and the overlying or underlying aquitards for use in the design and implementation of the construction dewatering system, development of the site groundwater flow model, and simulation of the radial collector wells in the groundwater model.” *Id.* Details of the pumping tests and the analytical methods are provided in FSAR Subsection 2.4.12, Appendix 2BB. *See* ER at 2.3-28. Contention NEPA 1.2(a) fails to reference either the description of the pumping tests in the ER or the more detailed discussion in FSAR Subsection 2.4.12 and 2.4.12 Appendix 2BB. *See* Petition at 15-18.

¹⁸ As with their APT claim, Petitioners rely almost exclusively on Miami-Dade County’s critique of the groundwater model, and provide limited, general references to the Application. *See* Petition at 18-21.

25). Petitioners fail to identify, much less rebut, the explanations for these modeling assumptions that FPL provided in its Application and fail to demonstrate that their critique is material to the findings the NRC must make to support issuance of the COL.

In an attempt to better characterize the groundwater flow system, FPL used a three-dimensional numerical groundwater flow model. ER at 2.3-34. The calibrated model was used to simulate the impacts of construction dewatering, construction of Turkey Point Units 6 & 7 (site grade increase and use of diaphragm walls for groundwater control), and operation of the radial collector wells. *Id.* at 2.3-35. The MODFLOW model, a constant-density, three-dimensional finite-difference model, with modular capability to add various equation solvers and boundary conditions to the basic model, was utilized. *Id.* at 2.3-34. The model represents hydrological features as boundary conditions, including a general head boundary that represents the influence of conditions beyond the model area, primarily recharge from the Everglades. *Id.* at 2.3-34 – 2.3-35.

As Petitioners acknowledge, “[t]he model was used to evaluate the origin of the water when the radial collector wells would be in operation and the resultant drawdown and velocities where the bay and aquifer meet.” Petition at 18. Despite the specific use to which the model was put, nowhere in Contention NEPA 1.2(b) (or anywhere else in the Petition) do Petitioners challenge the model’s determination that “approximately 92 to 100 percent of recharge to the radial collector wells would come from Biscayne Bay and up to 8 percent” would come from groundwater. *See* ER at 5.2-9. Nor do Petitioners challenge the ER’s determination that the “flow rate at the sediment-water interface resulting from the radial collector well operation would be approximately 0.00001 foot

per second.” *See id.* at 5.3-2. Instead, Petitioners appear to be concerned entirely with the impacts of radial collector well operation on salinity, a matter the model did not address. *See* Petition at 19-20. Petitioners fail to explain how modifying the groundwater model to properly account for salinity variability would have any effect on the ER’s evaluation of the salinity impacts on Biscayne Bay and the Biscayne aquifer resulting from the operation of the radial collector wells. Accordingly, Petitioners fail to demonstrate that the critique of the model is material. 10 C.F.R. § 2.309(f)(1)(iv).

As described in the response to Contention NEPA 1.1, the constant-density assumption used in the groundwater model is not the ER’s discussion of the salinity regime of those water bodies. The ER provides a complete discussion of the salinity of those water bodies in Chapters 2 and 5. The constant-density assumption is simply an input for a model that sought to “simulate the localized effects of construction dewatering, construction of Turkey Point Units 6 & 7 (site grade increase and use of diaphragm walls for groundwater control), and operation of the radial collector wells.” FSAR § 2.4.12, Appendix 2CC, “Groundwater Model Development and Analysis,” at 2CC-7.¹⁹ For the limited purposes of the model (evaluating the zone of influence of the radial collector wells and the approach velocity of the water), FPL concluded that the density variations would be insignificant compared to the hydraulic gradient caused by the pumping. *Id.* Because the density (and therefore salinity) of the water would not be a necessary input to evaluate the zone of influence of the radial collector wells, FPL utilized a constant-density model and chose seawater as the reference fluid. *Id.*

¹⁹ FSAR § 2.4.12, Appendix 2CC is referenced in the ER. ER at 2.3-35.

Petitioners fail to dispute the discussion in FPL’s FSAR that explains why the constant-density assumption is appropriate for the groundwater model. By ignoring the discussion in FPL’s application, Petitioners fail to demonstrate the existence of a genuine dispute with the application.²⁰ 10 C.F.R. § 2.309(f)(1)(iv).

Finally, Petitioners argue that the Biscayne Aquifer “contains preferential flow zones and a matrix porosity,” but FPL’s groundwater model fails to account for these flow zones. Petition at 19 (citing Petition Exhibit 3 at 25). However, the Application states that the model assumes that the “horizontal hydraulic conductivities for all strata range between 4E-04 cm/s (Freshwater Limestone) and 4 cm/s (Key Largo Limestone).” FSAR § 2.4.12, Appendix 2CC at 2CC-26. The application explains that this assumption is reasonable because, while a “unique distribution of hydraulic conductivities across the model area cannot be determined based on the available data . . . available results indicate the range of hydraulic conductivity to be expected.” *Id.* Petitioners fail to cite or rebut this explanation, nor do they explain why this assumption is inappropriate under NEPA.²¹

²⁰ Petitioners also cite to Miami-Dade County’s comments to argue that “the steady state model was compared to the average of the monthly averages from June (start of the wet season) and December (start of the dry season) 2008. Petition at 19. This argument again shows that Petitioners did not perform a detailed review of the Application. The County’s completeness comment did not identify what value was being averaged. *See* MDC Third Completeness Comments at 25. And neither do Petitioners. *See* Petition at 19. Had Petitioners reviewed the Application, they would have discovered that the County was referring to average groundwater levels. *See* FSAR § 2.4.12, Appendix 2CC at 2CC-25 (“The average groundwater levels measured between June 2008 and January 2009 are assumed to represent steady-state conditions for the Units 6 & 7 site and can therefore be used as the calibration targets for a steady-state simulation”). The fact that Petitioners omitted the very same information omitted by the County indicates that Petitioners simply restated the County’s criticism without performing an independent review of the ER. In any event, the Application provides a rationale for this assumption of average water levels, which Petitioners ignore.

²¹ Of course, Miami-Dade County is free to request whatever scientific rigor is necessary to comply with local laws and regulations. In this case, it appears that the County takes the position that changes may be necessary to the groundwater modeling FPL provided to it as part of the PPSA process. But Contention NEPA 1.2(b) may not be based on alleged non-compliance with state or local laws--it must be based on NEPA and 10 C.F.R. Part 51. As the Commission recently explained, there is “no NEPA requirement to use the best scientific methodology” and NEPA “should be construed in the light of reason if it is not to

Footnote continued on next page

In light of the Commission’s determination that NEPA does not require “the best scientific methodology,” and need not necessarily gather all possible data, Petitioners must allege that the assumptions in the groundwater model are so deficient as to be unreasonable. They fail to do so.

6. Contention NEPA 1.3 - Insufficient data on the current species diversity, abundance, and habitat utilization in Biscayne Bay

The ER provides insufficient data on the current species diversity, abundance, and habitat utilization in Biscayne Bay, and particularly in the vicinity of the radial wells, to aid the Commission in assessing the impacts of the radial collector well system to the Biscayne Bay ecosystem.

FPL Response

(i) Contention NEPA 1.3 Lacks Adequate Factual or Expert Support

Contention NEPA 1.3 relies, almost exclusively, on completeness comments of Miami-Dade County. *See* Petition at 20-22. Although it is cited only once, many portions of Contention NEPA 1.3 are taken directly from pages 9 and 10 of the MDC’s Third Completeness Comments.²² But the County’s completeness comments do not provide a sufficient basis upon which to support a contention. Indeed, the County’s

demand” virtually infinite study and resources. *Entergy Nuclear Generation Company* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC ___ (slip op. at 37) (March 26, 2010) (citations omitted). The Commission also explained in *Pilgrim* that an EIS is not intended to be a research document, reflecting the frontiers of scientific methodology, studies and data, nor does NEPA require agencies to use technologies and methodologies that are still emerging and under development, or to study phenomena “for which there are not yet standard methods of measurement or analysis.” *Id.* (citation omitted). “[W]hile there will always be more data that could be gathered, agencies must have some discretion to draw the line and move forward with decisionmaking.” *Id.*

²² *Compare* Petition at 20 (“the ER contains no comprehensive, seasonally based biological studies on both wildlife utilization (including birds, insects, fish, reptiles, amphibians, mammals, and aquatic invertebrates) and plant cover and species abundance for the area within and surrounding the proposed radial wells”) *with* Exhibit 3 at 10 (“Miami-Dade County reiterates its request for a seasonally-based biological survey for the proposed facility site that includes, but is not limited to, plant cover, plant species abundance, and utilization by wildlife species, including but not limited to birds, insects, fish, reptiles, and amphibians, mammals, and aquatic invertebrates”).

concerns generally arise from two issues totally unrelated to the ER: (1) over the question whether state law requires the preparation of a Comprehensive EIS as part of the SCA process (*see also* Petition Exhibit 23, FPL Third Round Completeness Responses (July 2010) at 24-25); and (2) the inability of the County to open certain documents FPL provided on CD. *See* Petition Exhibit 3 at 10. Neither of these issues has any bearing on whether the ER contains adequate information.

Further, Contention NEPA 1.3 explicitly ties the need for additional information on local wildlife to the operation of the radial collector wells (in both the caption and the body of the contention). Petition at 20. However, the County's comments on the need for additional surveys have nothing at all to do with radial collector well operation. *See* Petition Exhibit 3 at 9-10. The County's request is "for a seasonally-based biological survey for the proposed facility site." *Id.* at 10 (emphasis added). The County's requests for seasonal studies are in response to an ongoing permitting dialogue with FPL, in which FPL explained that because the Turkey Point Units 6 & 7 site, which is wholly contained within the existing industrial wastewater treatment facility, is frequently inundated with hypersaline water, it does not allow the survival of short-term flushes of vegetation, regardless of season.²³ *See id.* at 23. The County has not accepted this response and has asked for seasonal data. Regardless of whether this information must be provided to the County, it is unrelated to, and provides no support for, Petitioners' assertions regarding

²³ Similarly, the County's request for additional data on nesting stems from a desire to determine whether "the proposed plant area is being utilized for nesting." Exhibit 3 at 10 (emphasis added). Again, the pertinent issue is whether the Turkey Point Units 6 & 7 site, which is normally inundated, can currently support nesting.

the need for additional wildlife data for Biscayne Bay.²⁴

Petitioners also cite to a SFWMD completeness comment as support for the assertion that seagrasses are sensitive and can be significantly impacted by the loss of fresh water. Petition at 21 (citing SFWMD Second Completeness Comments at 3 (Petition Exhibit 6)). But that cited page of Petition Exhibit 6 discusses neither seagrasses nor seagrass habitat.

Finally, Petitioners cite to a report published in the journal “Wetlands” to support their assertion that “seagrass and benthic communities require a *consistent* salinity regime.” Petition at 21 (emphasis added) (citing Joan Browder *et al.*, *Biscayne Bay Conceptual Ecological Model, Wetlands*, vol. 25, no. 4, (Dec. 2005) at 863 (“Browder”) (Petition Exhibit 7)). However, in the very next paragraph, Petitioners cite the same source and claim that “sensitive seagrasses require a *variable* salinity regime.” *Id.* at 22 (citing Browder at 863) (emphasis added).²⁵ Petitioners’ lack of specificity on this point, and their failure to apply Browder’s claims directly to specific portions of the ER, render their specific assertion indecipherable.

The central claim of Contention NEPA 1.3, that FPL’s ER is deficient because it fails to include comprehensive seasonal surveys, is not accompanied by any meaningful support. Petitioners’ proffered support, the completeness comments of Miami-Dade County, are directed towards different impacts that are unrelated to the operation of the radial collector wells and are aimed at satisfying a different regulatory regime. Without

²⁴ Contention NEPA 1.3 also includes a reference to “concerns” raised by the Florida Department of Environmental Protection about “unknown impacts to the Bay’s benthic flora and fauna.” Petition at 21 (citing DEP Third Completeness Determination at 3 (Exhibit 2)). The DEP’s concerns are unspecified and insufficient to support admission of a contention.

²⁵ Petitioners’ confusion likely arises from Browder’s assertion that “[s]eagrass and benthic communities require a consistent (both in range and variability) salinity regime.” Browder at 863.

any foundational support, Contention NEPA 1.3 is left only with baseless accusations of hypothetical environmental impacts. Accordingly, Contention NEPA 1.3 is inadmissible. 10 C.F.R. § 2.309(f)(1)(v).

(ii) Contention NEPA 1.3 is Inadmissible Because it Fails to Show a Genuine Dispute With the Application

In Contention NEPA 1.3, Petitioners assert that the application provides inadequate data on avian species in the areas surrounding Turkey Point Units 6 & 7. Petition at 21. But the ER provides extensive information on bird populations. For instance:

A late winter survey for birds around the construction areas resulted in 36 avian species observed (see Table 2.4-1). Nine avian species (25%) were considered wintering birds, including most of the shorebirds. Most wading birds were relatively common, and the double-crested cormorant (*Phalacrocorax minor*) and white ibis (*Eudocimus albus*) were considered abundant. The predominance of observed water birds (wading birds, shorebirds, pelicans, etc.) was indicative of the primary habitats available: the industrial wastewater facility and the adjacent mangrove wetlands. A late summer survey (late June 2009) will occur to document wet/breeding season avian species and will be reported separately.

ER at 2.4-7.

Petitioners argue that, while the bird surveys discussed in the ER reveal approximately 90 species of birds, the ER provides no comprehensive seasonal data and largely consist of surveys from 1972 and a few more recent, but limited surveys between 2005-2009. Petition at 21. This is incorrect. Table 2.4-1 of the ER identifies five different avifauna surveys, only one of which was performed prior to 2007. ER at 2.4-41.

Petitioners argue that the ER omits information on bird utilization of the area surrounding the plant during the April-June breeding season. *Id.* While the ER does

state that a seasonal survey was to be performed in late June 2009 and would be included in a supplemental filing (the COLA was filed on June 30, 2009), Petitioners' assertion that "the ER fails to include any information" on bird populations during the summer breeding season is incorrect. Table 2.4-1 provides the results of multiple bird surveys performed during the late spring and summer months at the Turkey Point Site.²⁶ ER at 2.4-38 -2.4-41.

Petitioners also assert that no survey has been conducted to determine the extent to which the federally-listed wood stork utilizes the site other than opportunistic observations, but "surveys and studies are needed to determine the use and value of the habitat in order to ascertain the potential impacts the radial wells will have on flora and fauna in the area, including any effects on federally or state protected species." Petition at 21. Contrary to Petitioners' assertion, wood storks were included in surveys performed

²⁶ On September 3, 2010, FPL provided the NRC with Revision 1 to its Application. See FPL letter to NRC, Sept. 3, 2010, not yet available in ADAMS. COLA Revision 1 includes updates to the ER, which specifically address the results of the summer avian surveys, as FPL committed to doing in Revision 0 (June 30, 2009):

A late summer survey in June 2009 occurred to document wet/breeding season avian species. The late summer survey for birds around the construction areas resulted in 39 avian species observed. Wading birds, shorebirds and other water birds made up over half (54 percent) of the species observed. Such species as white ibis, least tern, white-crowned pigeon, common ground-dove, prairie warbler, red-winged blackbird and common nighthawk were the most abundant species observed on site. The breeding season was evident by the presence of juvenile (young-of-the-year) birds, including juveniles of most species of wading birds and shorebirds. The species composition is consistent with the predominance of aquatic/wetland habitats available at the site.

ER Rev. 1 at 2.4-7. Due to the timing of the submission, Petitioners were not afforded an opportunity to review COLA Revision 1 while formulating their contentions. However, to the extent Contention NEPA 1.3 is based upon the lack of discussion in ER Revision 0 about this summer avian survey, it is now moot. Where "a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant or considered by the Staff in a draft EIS, the contention is moot." *McGuire/Catawba*, CLI-02-28, 56 NRC at 383.

around the Turkey Point Units 6 & 7 site in November 2007 and June 2008. *See* ER Table 2.4-1.

Moreover, Petitioners do not address the ER's narrative discussion about the federally-listed wood stork:

Wood storks (*Mycteria americana*) are large wading birds that nest in trees and shrubs over water and forage on fish in shallow wetlands in the southeastern United States. . . They are seen in low numbers in the shallow portions of the industrial wastewater facility during the winter months. Three wood storks were observed foraging/roosting in shallow wetlands in the laydown area immediately west of the Units 6 & 7 plant area. They do not nest on or near the Turkey Point plant property but have historically nested in two colonies south of Tamiami Trail (U.S. Route 41) near (within 5 miles) the proposed Turkey Point-to-Levee transmission corridors. Portions of both corridors fall within the core foraging areas of both colonies (radius of 18.4 miles around each colony). Wood storks could also be found within aquatic habitats associated with the access roads, reclaimed water pipelines, and FPL-owned fill source. Critical habitat has not been defined for this species.

ER at 2.4-10.

Petitioners also claim that “there is no information on feeding, roosting, nesting, and breeding behavior.” Petition at 21. As shown above, this claim is clearly incorrect with respect to the wood stork. The ER also explains that, while bald eagles are seen in the area, they do not nest on or near the Turkey Point plant property. ER at 2.4-11.

While Petitioners do not claim that the ER must provide “feeding, roosting, nesting, and breeding behavior” for *every* bird species identified in the ER, they fail to identify which specific bird species must be further discussed. *See* Petition at 21. This lack of specificity is fatal.

In addition to birds, Petitioners claim, again without citation to the ER, that baseline studies are needed for seagrasses. Petition at 20-22. FPL's ER provides detailed descriptions of sensitive seagrasses, explaining that the "lush seagrass beds [in Biscayne Bay and Card Sound] provide food and refuge for approximately 70 percent of the area's recreationally and commercially important marine species." ER at 2.4-19. It also notes that the seagrass beds provide a food resource for sea turtles and the Florida manatee; important seagrass species include shoal grass, turtle grass, and manatee grass. *Id.* The ER also acknowledges that Johnson's seagrass is a threatened species located within Biscayne Bay and Card Sound, but that it does not appear as far south as the Turkey Point plant property. ER at 2.4-15; *id.* at 2.4-45. Critical habitat for Johnson's seagrass, which does not include the Turkey Point Unit 6 & 7 site, is identified on Figure 2.4-4. *Id.* at 2.4-58.

Petitioners' failure to reference these discussions of bird and seagrass populations in the area surrounding the Turkey Point Plant property renders Contention NEPA 1.3 inadmissible. Without specific challenges to specific portions of the ER, it is not clear what portions, if any, of the document Petitioners dispute. *See* 10 C.F.R. § 2.309(f)(1)(vi).

7. Contention NEPA 1.4 - Insufficient data on the habitat conditions and habitat requirements in the Biscayne Bay

The ER Provides insufficient data on the habitat conditions and habitat requirements in the Biscayne Bay, and particularly in the vicinity of the radial wells, to aid the Commission in assessing the impacts of the radial collector well system to the Biscayne Bay ecosystem.

FPL Response

In Contention NEPA 1.4, Petitioners assert that “there is insufficient data on the habitat conditions and habitat requirements in the vicinity of the radial wells and within Biscayne Bay, to aid the Commission in assessing the impacts of the radial collector well system to the Biscayne Bay ecosystem.” Petition at 22 (citing ER at 2.4-14 – 2.4-31).

According to Petitioners:

Such data is necessary to determine the extent to which the radial wells’ disruption of the Bay’s salinity regime may impact specific species and their habitats. For instance, sensitive seagrasses require a variable salinity regime with estuarine conditions. Hypersaline conditions resulting from the withdrawal of freshwater via radial wells may adversely affect those seagrass communities. Without this [sic] data, the ER fails to establish an environmental baseline that is the basis for evaluating impacts and alternatives.

Id.

(i) Contention NEPA 1.4 Is Not Supported by Adequate Facts or Expert Opinion

Contention NEPA 1.4 is comprised of three sequential claims, none of which is supported by allegations of fact or expert opinion. *First*, Petitioners assume, without clearly stating, that the radial collector wells will withdraw fresh water. *Id.* *Second*, Petitioners assert that withdrawal of fresh water will result in “[h]ypersaline conditions.” *Id.* *Third*, Petitioners hypothesize that these hypersaline conditions “may adversely affect . . . seagrass communities.” *Id.*

Lacking any expert opinion to support Contention NEPA 1.4, Petitioners must make supported allegations of fact. 10 C.F.R. § 2.309(f)(1)(v). They do not. Instead, they offer mere conjecture. A “bald assertion that a matter ought to be considered or that a factual dispute exists . . . is not sufficient;” rather, “a petitioner must provide documents

or other factual information or expert opinion” to support a contention’s “proffered bases.” *Private Fuel Storage*, LBP-98-7, 47 NRC at 180 (citations omitted).

(ii) Contention NEPA 1.4 Fails to Demonstrate the Existence of a Genuine Dispute on a Material Issue

Petitioners ignore the detailed discussion of habitat conditions that is provided in Section 2.4.2.1 of the ER, “Aquatic Communities.” The introduction to ER Section 2.4.2.1 states that “[t]he following subsections include descriptions of important aquatic resources at the Turkey Point Units 6 & 7 plant area, the Turkey Point plant property, and surrounding areas. These descriptions include information related to the abundance of important species found and the value of the habitats present.” ER at 2.4-14. Section 2.4.2.1 goes on to state:

Important communities in Biscayne Bay and Card Sound include the mangrove forest on its eastern edge, and seagrasses, which are found primarily in Central and South Bays. The mangrove forest is one of the longest continuous stretches of mangroves remaining on the east coast of Florida. The lush seagrass beds provide food and refuge for approximately 70 percent of the area’s recreationally and commercially important marine species. Seagrass beds are also a food resource for sea turtles and the Florida manatee. Important seagrass species are shoal grass, turtle grass, and manatee grass.

ER at 2.4-19.

The ER also identifies the federally endangered small-tooth sawfish and the mangrove rivulus, a State and federally listed species of concern, as two important fish species in the waters adjacent to the Turkey Point plant property. ER at 2.4-23 – 2.4-24. The ER explains that “the small-toothed sawfish inhabits inshore bars, seagrass beds, and mangrove areas.” *Id.* at 2.4-15. The ER also states that the mangrove rivulus “is

extremely vulnerable to habitat modification and fragmentation, environmental alteration, and human development/encroachment.” *Id.* at 2.4-23.

Further, Section 2.4.2.4, “Habitat Importance,” provides a detailed discussion of the portions of Biscayne Bay and Card Sound that have been designated as essential fish habitat under the Magnuson-Stevens Fishery Conservation and Management Act. ER at 2.4-25 – 2.4-30. The ER addresses the Snapper-Grouper Fishery Management Plan, which includes ten families of fishes containing 73 species. *Id.* at 2.4-26. Near shore hard bottom areas, mangrove habitat, oyster/shell habitat, and seagrass habitat along the western edges of Biscayne Bay and Card Sound are designated habitat areas of particular concern for these species, the most abundant of which is the gray snapper. *Id.* The ER describes the habitat requirements of this species:

In contrast to most snapper species, there is substantial literature on habitat use in juvenile stages of gray snapper, mostly from south or central Florida. Settlement stages and early juveniles primarily use grass beds before migrating to hard structures in deeper waters with growth.

Based on reviews of 40 years of surveys, and new sampling in the Biscayne Bay area, newly settled stages of gray snapper commonly existed in grass beds, were consistently absent from mangrove and hard bottom habitats, and were uncommon or rare from all habitats exceeding 5 meters deep. Early juvenile stages (2.5 to 7.0 centimeters) were more widely distributed, particularly on the habitat scale, existing among a variety of hard structures as well as mangroves and grass beds. The absence of newly settled life stages of gray snapper from hard bottom and mangrove habitats may result from the older resident fauna and more concentrated predation pressures in these habitats (NMFS 2008c).

In summary, early stages of gray snapper exist in estuaries and shallow marine areas. Bottom types of high value include seagrass flats (*Thalassia*, *Syringodium*, and *Halodule*); soft marl bottoms, fine marl mud with shell and

rock outcrops; mangrove roots; hard bottom structures; and shallow basins with seagrasses adjacent to mud banks (NMFS 2008c).

ER at 2.4-27. The ER also describes the Penaeid Shrimp and Spiny Lobster essential fish habitat designations in Biscayne Bay and explains that seagrass beds are important to these species. *Id.* at 2.4-28 – 2.4-30. The ER provides information on the local habitats of important species, including seagrasses. *See* ER at 2.4-14, 2.4-15, 2.4-19. Contention NEPA 1.4 ignores the ER’s discussion of the seagrass habitat, and fails to provide any explanation for Petitioners’ assertion that the ER must address the habitat conditions for other, unidentified species. *See* Petition at 22.

Petitioners also assert that the ER fails to establish an “environmental baseline” for aquatic species. Petition at 22. However, Section 2.4.2.1 of the ER describes the baseline study of aquatic communities in Card Sound, adjacent to the Turkey Point plant property:

Baseline Aquatic Biological Characterization Study

In March 2008, a one-year Baseline Aquatic Biological Characterization Study in Card Sound Canal was initiated adjacent to the Units 6 & 7 plant area and in nearshore waters of Card Sound. The sampling program includes bi-weekly trawling for juvenile and adult fish and shellfish and netting for fish and shellfish eggs and larvae at five stations (two within Card Sound Canal and three in the nearshore area of Card Sound near the mouth of the canal). Results are summarized below for the first three quarters of sampling. . .

ER at 2.4-19 – 2.4-21. Petitioners ignore this discussion of the baseline evaluation of aquatic communities and incorrectly claim that “the ER fails to establish an environmental baseline.” Petition at 22.

(iii) Contention NEPA 1.4 Lacks Specificity

While seagrasses are the only type of wildlife specifically identified in Contention NEPA 1.4, Petitioners imply that the habitat definition deficiency extends to other species as well. *See* Petition at 22. To the extent Contention NEPA 1.4 challenges the ER’s description of the habitat conditions in Biscayne Bay for other plants and animals, it lacks specificity. 10 C.F.R. § 2.309(f)(1)(i). Petitioners “must articulate at the outset the specific issues they wish to litigate as a prerequisite to gaining formal admission as parties.” *Oconee*, CLI-99-11, 49 NRC at 338. Petitioners may not litigate the ER’s discussion of habitats of plant and animal species that Petitioners fail to even identify.

8. Contention NEPA 1.5 - Insufficient data on direct, indirect and cumulative impacts of the radial collector wells

The ER provides insufficient data on the direct, indirect and cumulative impacts of the radial collector wells.

FPL Response

In Contention NEPA 1.5, Petitioners assert several “direct, indirect, and cumulative impacts” of radial collector well operation. Petition at 23. Among these alleged impacts is the effect of the radial collector wells on salinity, which was discussed in previous sections of this response to Contention NEPA 1. Also included in Contention NEPA 1.5 are concerns regarding impacts to the Bay bottom during installation and concerns about a hypersaline plume in the groundwater beneath the plant property. Each of these claims impermissibly fails to reference, address, or dispute the ER’s discussion of these very topics. 10 C.F.R. § 2.309(f)(1)(vi). Finally, Contention NEPA 1.5 alleges that the ER fails to address the impact of the radial collector wells on the Biscayne Bay Coastal Wetlands (“BBCW”) project, an aspect of the Comprehensive Everglades Restoration Plan (“CERP”), and the impact of sea level rise on the radial collector well

operations. But Petitioners fail to show that either of those issues are material to this proceeding. 10 C.F.R. § 2.309(f)(1)(iv). Accordingly, Contention NEPA 1.5 does not assert an admissible contention.

(i) The ER Adequately Discusses the Impact of Radial Collector Well Operation on Local Salinity

Petitioners claim that “[t]here is *no discussion* of the wells’ potential disruption of the saltwater regime.” Petition at 23 (emphasis added). As discussed above, this statement is incorrect. The ER identifies that the radial collector wells may have an impact on salinity, but that the impact would be minimal. ER at 5.2-21.

(ii) The ER Adequately Discusses Radial Collector Well Installation Impacts and Movement of Sediments and Biota

Petitioners also claim that “[t]here is *no discussion* of the potential for the radial wells to disturb the overlying benthic community (seagrass, hard bottom communities, etc.) during installation, the potential for a frac-out and the potential impacts to the submerged bottoms, whether sediments fauna, and biota could enter the well, and whether sediments and nutrients could be depleted in the surrounding area due to a downward flow of water in the area.” Petition at 23 (emphasis added).

Contrary to Petitioners’ claims, the ER explains why the Bay bottom would not be disturbed during installation:

The wells would be located on the Turkey Point peninsula, east of the existing units. Each radial collector well would consist of a central reinforced concrete caisson extending below the ground level with laterals projecting from the caisson. The well laterals would be advanced horizontally a distance of up to 900 feet beneath Biscayne Bay and installed to a depth of approximately 40 feet. The lateral screens under Biscayne Bay would be installed by horizontal drilling. Water from the wells would flow by

head force to a collection caisson where the water would be pumped via pipelines to Units 6 & 7, thereby limiting surface disturbance to the bottom of Biscayne Bay. The pipelines would cross the following habitat types: existing perimeter roads, mangroves, and a cooling canal. Another 3 acres of industrial/filled habitat would be required for a construction laydown area.

* * *

Because the well laterals would be drilled horizontally beneath Biscayne Bay, and surface water and sediment would not be disturbed, no increases in turbidity or sedimentation would occur.

No other significant impacts to aquatic habitats would result. The construction of the radial collector wells and associated pipelines would not affect any rare or protected aquatic species. Overall, the impacts from construction of the radial collector wells would be SMALL and would not require mitigation beyond that described above.

ER at 4.3-23 (emphasis added). Petitioners fail to reference this discussion in the ER or identify a mechanism by which installation impacts could occur to the Bay bottom when the wells would be drilled horizontally under the Bay from caissons installed on land.

The ER also explains that: “because the water is not collected directly by the wells, but instead flows through the porous limestone approximately 40 feet below the bottom of Biscayne Bay, no aquatic organisms in Biscayne Bay would be affected.” ER at 5.3-2. This is because the “flow rate at the sediment-water interface resulting from the radial collector well operation would be approximately 0.00001 foot per second,” so slow that the “movement of water into the aquifer would not be discernable at the sediment-water interface, which would be separated from the intake screens by a layer of limerock approximately 40 feet thick.” *Id.* Petitioners fail to identify a mechanism by which “sediments fauna, and biota” would be drawn through 40 feet of limerock by water moving at 0.00001 foot per second.

**(iii) The ER Adequately Discusses the Hypersaline Water
Beneath the Plant Property**

Petitioners also claim that the ER failed to acknowledge a hypersaline plume. Petition at 23. This is a misrepresentation of the contents of the ER. As explained in ER Chapter 5, the “Biscayne aquifer beneath the Turkey Point plant property is connected hydrologically to both Biscayne Bay and the cooling canals of the industrial wastewater facility.” ER at 5.2-22. Also, “[t]he water in the industrial wastewater facility is hypersaline with salinity concentrations approximately twice that of Biscayne Bay.” ER at 2.3-11. As a result, “the industrial wastewater facility . . . discharges hypersaline water to the Biscayne aquifer.”²⁷ ER at 5.2-22.

Petitioners next claim that the “ER contains no information regarding the delineation of this plume and the extent to which this plume would be affected by the proposed groundwater withdrawals via the radial collector wells.” Petition at 24. According to Petitioners, the ER must describe “how the wells could capture, redirect, or otherwise affect groundwater from the existing plume” and the “potential impacts of inducing ground water flow towards the proposed radial wells.” *Id.* Petitioners simply speculate that the wells “could” capture this groundwater plume. However, they fail to specify what impacts they believe would occur assuming the groundwater of the hypersaline plume were drawn into the radial collector wells. Common sense would seem to indicate that, if hypersaline water is drawn into the radial collector wells it would serve to reduce both saltwater intrusion and the size of the hypersaline plume. That

²⁷ The ER does not use the phrase “hypersaline plume,” and neither does the reference Petitioners cite in support of their claim. See Petition at 23 (citing MDC Third Completeness Comments at 27). The cited page of the County’s completeness comments simply refer to a “plume emanating from FPL’s Cooling Canal System, which contains high levels of chlorides.” MDC Third Completeness Comments at 27. This is consistent with the ER’s description.

would be consistent with Petitioners' stated goals of maintaining natural salinity levels in the Biscayne aquifer. But Petitioners appear to allege, without any explanation, that the effects of drawing hypersaline water into the wells would somehow be detrimental.

In any event, Petitioners fail to demonstrate that this issue is material—that it could “make a difference in the outcome of the licensing proceeding.” *Oconee*, CLI-99-11, 49 NRC at 333-34. ERs need not address every environmental impact, and Petitioners do not explain why the ER must address this hypothetical issue.

(iv) Impacts to CERP Projects Are Not Material to the NRC's Environmental Review

Next, Petitioners argue that the operation of the radial collector wells could be detrimental to an objective of the Comprehensive Everglades Restoration Plan (“CERP”), i.e., restoring more freshwater flow to Biscayne Bay. Petition at 24 (citing DEP, FPL Turkey Point Units 6 & 7 Completeness Determination (Plant), p. 4 (Jan. 13, 2010) (“DEP Second Completeness Determination”) (Petition Exhibit 10)). Once again, Petitioners' cited reference does not provide support for their claim—it merely asks a question. *See* Petition Exhibit 10 at 4.

Petitioners go on to allege that the Florida DEP has asserted that the radial wells may extract fresh water from the aquifer, “thus counter acting CERP projects intended to deliver fresh water to the Bay's littoral zone.” Petition at 24-25 (citing Petition Exhibit 5 at 2). Petitioners fail to allege (and have no support to claim) that the operation of the radial collector wells will impact freshwater objectives of CERP. Instead they simply cite to documents that merely discuss the issue, which is clearly an insufficient basis upon which to rest a contention.

Moreover, NEPA requires an evaluation of impacts of the proposed action on the environment, not its impacts on other projects. *See* 10 C.F.R. § 51.45(b)(1). The ER clearly discussed the impacts of radial collector well operation on the salinity of the Bay and the aquifer. ER at 5.2-19, 5.2-21. The existence of a program with goals related to salinity in the Bay will not affect how or whether the radial collector wells will affect the environment.

NEPA and Part 51 require FPL to discuss the pre-existing environmental degradation that the BBCW project is intended to address, as part of its cumulative impact analysis. The ER comprehensively addresses this historical disruption of the natural freshwater flow in south Florida. *See, e.g.*, ER at 2.3-3 – 2.3-5. The ER also describes CERP and the BBCW project and the reasons for their existence. ER at 2.3-5, 2.3-12, 5.11-2, 5.11-5. That is all the law and the regulations require.

**(v) Sea Level Rise Impacts on the Radial Collector Wells
Are Not Material to the NRC’s Environmental Review**

Finally, Petitioners assert that “the ER fails to discuss the potential impacts of sea level rise *on the radial collector well system.*” Petition at 25 (emphasis added). This is not a NEPA issue that is subject to consideration under Part 51. Effects of the environment on the reactor and its associated facilities are properly considered as part of the NRC’s safety review, but not as part of its environmental review.²⁸ Accordingly, this aspect of Contention NEPA 1.5 does not present an issue that the NRC must consider in this proceeding.

²⁸ In Contention NEPA 1.5, Petitioners reference concerns about saltwater intrusion, but make clear that saltwater intrusion is not the focus of this contention, which claims that “the ER does not discuss how sea level rise could affect these radial well operations.” Petition at 25.

The NRC Staff recently published supplemental guidance addressing this very issue. Supplemental Staff Guidance to NUREG 1555, Environmental Standard Review Plan (ESRP) for Consideration of the Effects of Greenhouse Gases and of Climate Change (April 8, 2010), ADAMS Accession Number ML ML100990185 (“Supplemental Guidance”). There, the NRC Staff explained that, although the Council on Environmental Quality recently published draft guidance stating that agencies should address public safety ramifications of climate change under NEPA, the NRC would not be following that approach. Supplemental Guidance at 8-9. While “it may be entirely appropriate” for some federal agencies to consider “public health and safety” in their EISs, the NRC would not, because such concerns are already covered by the safety reviews it performs under its organic statute (the Atomic Energy Act of 1954, as amended, 42 U.S.C § 2011 *et seq.*). While “[p]ublic health is considered as part of the NRC’s NEPA review . . . public safety is considered in the NRC’s safety evaluation reports (SERs) developed concomitant with its EIS for the regulatory action.” *Id.* The Supplemental Guidance went on to explain:

Apart from any NRC Staff safety evaluation during initial licensing, there is a continuing obligation of a nuclear power plant license holder to ensure that its plant stays within the licensing basis. If it becomes evident that long-term climate changes influences the most severe of natural phenomena reported in the site vicinity, then a license holder may need to take action to ensure the licensing basis is preserved. Therefore, while CEQ included the public safety aspect of climate change in its draft guidance, NRC Staff considers this aspect separately for new reactor applications.

Id. at 11.

Accordingly, Petitioners’ sea level rise claim is inadmissible as it fails to raise an issue that is material to the determinations the NRC must make. 10 C.F.R. § 2.309(f)(1)(iv).

9. Contention NEPA 2 - Impacts of the reclaimed wastewater system on groundwater, air, surface water, wetlands and CERP

The ER fails to adequately address the direct, indirect, and cumulative impacts of the reclaimed wastewater system on groundwater, air, surface water, wetlands and CERP.

FPL Response

It is unclear whether Petitioners intend what they label as “Contention NEPA 2” to be a stand-alone contention or the introduction to the three sub-contentions that follow. Petition at 26. If “Contention NEPA 2” is meant to be a separate contention, it is inadmissible for failure to meet the requirements of specificity, relevance, factual support, or identification of a dispute with the Application on a material issue of fact or law. Without any basis or elaboration, Contention 2 alleges that the ER “fails to address the direct, indirect and cumulative impacts of this reclaimed water system on groundwater, air, surface water, wetlands and CERP” *Id.* Clearly, this unsupported allegation fails to meet the Commission’s pleading requirements and must be denied. It is well-settled law that the Commission’s Rules of Practice bar contentions that merely claim a deficiency without providing support for the claim. *Fansteel*, CLI-03-13, 58 NRC at 203 (observing that contentions are not admissible if they are not supported by fact or reasoned expert opinion).

Moreover, the Petitioners’ allegations are demonstrably not true. A wealth of information is provided in FPL’s application regarding the environmental impacts associated with the use of reclaimed water. For example, with regard to aquatic impacts from use of the reclaimed water system, the ER states:

The blowdown from the cooling towers would be discharged by way of the blowdown sump to the Boulder

Zone, a deep (approximately 2900 feet below grade) and highly cavernous zone of saline groundwater that is used for underground injection of industrial and domestic wastes in South Florida. Radionuclide transport analysis for the deep injection wells was performed to determine impacts (i.e., dose) to potential receptors present at the closest point(s) to the Turkey Point plant property (Section 5.4). Based on the analysis and resulting receptor doses, impacts to the Boulder Zone from cooling system discharge containing radioactive effluent were found to be SMALL. Based on these results, the operation of the deep injection wells would meet the requirements established by the EPA, and imposed by the underground injection control permit.

No aquatic organisms would be exposed to chemical or thermal effects of the blowdown. There is no reasonably foreseeable pathway by which groundwater in the Boulder Zone could reach surficial aquifers or surface waters. *No impacts to aquatic resources would result from cooling water discharge.*

ER at 5.3-3 to 5.3-4 (emphasis added). With regard to surface and groundwater impacts,

ER Section 5.5.1.2 states:

The wastewater and sanitary waste treatment effluent would be disposed of using deep injection wells under the provisions of the Underground Injection Control (UIC) Rule in 62-528 F.A.C. Therefore, the effluent limits would be set by the underground injection control permit, thus regulating the effluent concentrations and operation of the deep injection wells. The wastewater would be discharged into the Boulder Zone approximately 2900 feet underground. Considering the anticipated amount of dilution for wastewater discharged to the Boulder Zone and the limits that would be placed on discharges by the underground injection control permit, the potential impacts from wastewater/sanitary discharge from Units 6 & 7 on groundwater would be SMALL. *There would be no impacts on surface water or groundwater from wastewater/sanitary waste discharge.*

ER at 5.5-2 (emphasis added). With regard to impacts to wetlands at the site, the ER states:

The surface water bodies that could be impacted by operation of Units 6 & 7 are Biscayne Bay, wetlands, and the cooling canals of the industrial wastewater facility. Because of the existing operational layout of the Turkey Point plant property, surface water flow is primarily to the industrial wastewater facility, which would limit impacts to offsite areas. Impacts to surface water quality could occur from soil disturbance and erosion from maintenance activities, which could result in increased sediment loading to nearby water bodies. Also, pollutants associated with vehicular traffic and equipment operation and maintenance could impact nearby surface water bodies. The use of environmental best management practices along with a spill prevention plan would prevent or minimize the potential impacts of releases to the environment.

Any ground-disturbing activities that meet federal, state, and local regulations requiring approval permits would be permitted and overseen by state and federal regulators, and guided by environmental best management practices and spill prevention plans. Any impacts to surface water quality during operations would be SMALL and would not require mitigation beyond environmental best management practices and other permit requirements.

ER at 5.2-20. In light of these discussions, Petitioners' Contention 2 – a contention of omission – must be rejected.

10. Contention NEPA 2.1 - Potential impacts on groundwater quality of injecting polluted wastewater into the Floridan Aquifer

The ER fails to adequately identify, analyze, and discuss the potential impacts on groundwater quality of injecting polluted wastewater into the Floridan Aquifer via underground injection wells.

FPL Response

Contention NEPA 2.1 alleges that the ER fails to address impacts from disposal of liquid effluents through deep well injection into the Boulder Zone. Petition at 26. Petitioners argue that the ER does not adequately address the impacts expected from injecting effluents, does not characterize the make up of the injectate and does not

address the possibility that the injectate could migrate to into the Lower Floridan Aquifer. *Id.* at 26-30. Contention NEPA 2.1, however, is inadmissible because it fails to provide sufficient support for its conclusory claims, fails to dispute any specific portion of the Application, and it fails to demonstrate the existence of a genuine dispute on a material issue. 10 C.F.R. §§ 2.309(f)(1)(v) and (vi). As discussed below, the ER describes the effluents to be injected into the Boulder Zone and the reasonably foreseeable environmental impacts that would be expected as a result of the injection. *See e.g.*, ER Tables 3.3-1, 3.3-2, 3.6-2, 3.6-3 (listing the effluent stream constituents); *see also* ER § 5.2.1.1.9 “Operation of Deep Injection Wells” (describing the reasonably foreseeable environmental impacts from use of the deep wells). Additionally, even though FPL believes migration of effluents from the Boulder Zone to the Underground Source of Drinking Water (“USDW”) is not a reasonably foreseeable event, FPL provided a bounding analysis of a radiological receptor from the effluent stream. ER at 5.4-2.

Unlike many other steam generating power plants, nuclear or otherwise, no Turkey Point Units 6 & 7 plant process waste streams would be discharged to surface water. ER at 5.2-9. Instead, wastewater from Turkey Point Units 6 & 7, including the treated effluent from the sanitary wastewater and cooling tower blowdown, would be discharged, deep underground, into the Boulder Zone of the lower Floridan aquifer via twelve deep injection wells. ER at 3.3-2.

As described in the ER, the Boulder Zone is a highly permeable zone in the Lower Floridan saltwater aquifer underlying much of southern Florida. The Boulder Zone is not a source of potable water and there is no credible pathway for the injection

well releases to reach potable water.²⁹ ER at 5.4-2; FSAR at 11.2-3. As a result, there is no reasonably foreseeable liquid effluent pathway from the Boulder Zone to potable water sources. ER at 5.4-2; FSAR at 11.2-3.

FPL's ER provides a description of the deep-well discharge process. As described in the ER, six pairs of deep injection wells (five primary and one backup) would be installed, by drilling, in the plant area. See ER at 3.9-12 and Figure 3.1-3. The injection wells would be 24-inch diameter wells and would extend approximately 2,900 to 3,500 feet below grade. ER at 3.9-12. Each injection well pair would be equipped with a dual-zone monitoring well. ER at 6.2-3.

Deep well injection of waste water into the Boulder Zone is closely regulated by the DEP pursuant to authority delegated to it by the EPA. ER at 2.3-19. Wastewater injection must meet the requirements established in DEP's underground injection control ("UIC") program permits. ER at 3.4-6. The UIC program prescribes methods and approaches for construction of deep wells, such as sequential casing installation and isolation of individual aquifers, in order to protect groundwater resources during the installation and development of injection wells. ER at 4.2-11.

An USDW underlies the Turkey Point plant property. ER at 5.2-10. The top of the Boulder Zone (i.e., the injection zone) is estimated to be approximately 2,900 feet below the land surface. *Id.* Therefore, the deep injection well casings will be installed to a depth of approximately 2,900 feet below grade. ER at 6.2-3. In the area of the Turkey

²⁹ The Boulder Zone is considered to be homogeneous and capable of exhibiting radial flow. ER at 5.2-10. The 60-year areal extent of injected fluid created by this injection rate would have a radius of approximately 9 miles. ER at 5.2-10. This areal flow could be affected by a number of factors, including the porosity and effective injection thickness, which could increase the 60-year radius of influence by 3.2 to 12.3 miles. ER at 5.2-10.

Point plant property, the base of the USDW is approximately 1,450 feet below land surface. ER at 5.2-10. Thus, a 1000-foot-thick middle confining layer separates the USDW from the injection zone. *Id.* Injection would occur below the middle confining layer at depths of approximately 2,700 feet or greater, approximately 900 feet below the base of the lowest USDW.³⁰ ER at 5.4-2; FSAR at 11.2-3.

As described in the ER, several State and federal regulatory processes will serve to ensure that the USDW is protected from intrusion from wastewater injected into the Boulder Zone. Prior to the permitting of the full complement of injection wells, an initial exploratory well must be permitted and installed to confirm the geology and hydrogeology of the site for disposal of fluids via deep well injection. ER at 6.1-2. This exploratory deep injection well and accompanying dual-zone monitoring well are planned for installation on the eastern perimeter of the Turkey Point Units 6 & 7 plant area. ER at 6.1-2.

The DEP can not issue a Class I deep injection well construction permit unless the data collected during the construction testing of the exploratory well confirms that the geology and hydrogeology of the site are appropriate for construction and operation of a Class I deep injection well. *See* Proposed Turkey Point Units 6 & 7, Revised Hydrology Response to NRC Information Request in COL Application Acceptance Review Letter (Revised Hydrology Response) (November 24, 2009) (ADAMS Accession No. ML093310169) (“Hydrology Response Letter”). Once permitted, the exploratory well and the dual-zone monitoring well would be constructed and operated to monitor the injection process and to ensure that no adverse effects occur to the overlying aquifer

³⁰ A typical injection well design is shown in Figure 3.4-3 of the FPL ER.

units. ER at 6.3-3. The data collected from these wells will be submitted to DEP in support of FPL's permit application for the remaining injection and monitoring wells. ER at 6.3-3.

In addition to the information provided in the ER described above, FPL provided additional detail on the issues raised by Petitioner in Contention NEPA 2.1 in FPL's Hydrology Response Letter. Therein, FPL further explained that the DEP's regulatory permitting process for underground injection is strenuous. *See* Hydrology Response Letter at 9. Moreover, FPL stated that the DEP will not permit the construction of the full complement of injection wells, much less authorize their use for discharge of effluents, until it is assured that the USDW will be protected. *Id.*

Operating and monitoring data compiled during the operational testing phase will be provided in support of a Class I deep injection well operating permit. *Id.* If the data demonstrate that the injection well is operating as designed and in accordance with F.A.C. Rule 62-528, the DEP will issue an operating permit for the injection well. *Id.* Continual operating and monitoring data are required to support renewal of the operating permit which is necessary every five years. *Id.*

Petitioners do not cite, let alone dispute, any of this information, which was provided in the ER and in FPL's Hydrology Response Letter. Instead, without citing to any fact or expert opinion, the Petition argues that FPL cannot demonstrate that the confining unit will protect the USDW. Such an unsupported claim does not provide a sufficient basis for demonstrating a material dispute with the Application. *Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station)*, LBP-93-23, 38 NRC 200, 246 (1993). *See* 10 C.F.R. §§ 2.309(f)(1)(v) and (vi). To raise a genuine

dispute, the Contention must include a supported statement of why the Application is unacceptable. *Turkey Point*, LBP-90-16, 31 NRC at 521 & n.12.

Petitioners have provided no evidence to contradict the basic fact that DEP will not permit the construction, much less the operation, of the full complement of injection wells without FPL first demonstrating that the operation of the wells will not have an adverse effect on the overlying USDW. Therefore, Contention NEPA 2.1 fails to demonstrate the existence of a genuine dispute with the Application on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(vi).

Additionally, there is inadequate support for the allegations in Contention NEPA 2.1 that FPL did not demonstrate the confining unit will protect the underground source of drinking water from upwelling effluent. Petition at 26-27. Petitioners allege that, because injectate incursions into the USDW are reported to have occurred in other locations, they will occur at Turkey Point and must be considered. *See* Petition at 27. Petitioners, however, offer no fact or opinion that links the operational experience at municipal waste disposal wells to FPL's proposal, as described in the ER.

The assertions in Contention NEPA 2.1 and the basis provided do not even find fault with FPL's proposal, rather they focus on municipal waste disposal facilities and their operation. *See* Petition at 27-28 (discussing municipal waste disposal wells in other parts of Florida).³¹ General concerns about municipal waste facilities such as the ones

³¹ Petitioners rely on an EPA Notice of Final Rule and EPA's Relative Risk Assessment of Treated Waste water in South Florida. Petition at 27-28 (citing 70 Fed. Reg. 70,513 (November 22, 2005)) (Petition Exhibits 12, 13 and 14). These documents address certain municipal waste disposal facilities that employ deep well injection technology to dispose of their wastes. However, neither Petition Exhibits 12, 13 or 14, nor anything else in the Petition provide a nexus to the operation of a deep well at Turkey Point. And, while EPA's actions were as a result of "municipal injection operations ... show[ing] that the Boulder Zone in *some areas* of South Florida provides less confinement than originally thought," there is no indication

Footnote continued on next page

raised by Contention NEPA 2.1 are not within the scope of this proceeding and cannot be the basis for intervention in this hearing. In any event, as Petitioners point out, EPA revised its regulations governing certain municipal disposal wells in Florida to address the very concerns to which Petitioners cite. *Id.* Petitioners do not explain why the revised regulations do not adequately address these same concerns for the deep wells to be deployed Turkey Point Units 6 & 7.

After its discussion of perceived deficiencies in the ER as it relates to the deep well injection proposal, Contention NEPA 2.1 alleges that the ER does not provide adequate information regarding the constituents in the reclaimed water supply. *See* Petition at 28. Petitioners then claim that there is “*no way to tell ... what is in the effluent, and in what amount.*” *Id.* (emphasis added). Notably, Petitioners then go on to cite a section of the ER where the constituents of the effluent are actually discussed. *Id.* at 28 (citing ER §3.3). Contrary to Petitioners’ assertions, the ER discusses the makeup of the water in various sections.

To the extent that Petitioners allege in Contention NEPA 2.1 that there is no discussion of radioactive effluents and byproduct material in the ER, their argument ignores the contents of the ER. Moreover, to the extent Petitioners attempt to challenge the determinations made by the Commission regarding the nature and acceptability of the byproduct materials released by the AP1000, their claims constitute a challenge to the regulations; and, as such, are inadmissible in the instant proceeding. *See Oconee*, CLI-99-11, 49 NRC at 345.

that the Boulder Zone in the Turkey Point site area fails to provide the anticipated confinement. Petition at 27-28, emphasis added.

FPL performed its analysis of radioactive effluents consistent with 10 C.F.R. Parts 20, 50, 51 and 52. As discussed in FPL's FSAR (which the Petitioners do not even mention), the proposed underground injection of liquid radioactive waste from Turkey Point Units 6 & 7 meets Part 20 requirements and Appendix I guidance. First, the AP1000 Design Control Document meets 10 C.F.R. § 20.1302(b)(2)(i) by demonstrating compliance with the 10 C.F.R. Part, Appendix B effluent concentration limits. AP1000 Design Control Document § 11.2.3.4, DCD at 11.2-18. Effluents from the AP1000 are approximately 11 percent of the effluent concentration limit. *Id.* The annual releases from the plant have also been evaluated based on operation with the maximum defined fuel defect level. *Id.* Based on the maximum defined fuel defect level, effluents from the AP1000 are 53 percent of the effluent concentration limit. *Id.* These concentrations were generically determined by rule and are not subject to challenge in this individual licensing proceeding. *See* New Reactor Proceedings Policy Statement, 73 Fed. Reg. at 20,972.³²

³² Petitioners also raise concerns about certain undefined "hazardous contaminants" and personal care products in the reclaimed water source. Petition at 28-29. These arguments are equally unsupported and do not provide a basis for the proposed contention. Petitioners claim these undefined contaminants are unaddressed in the ER. These allegations fail to provide an adequate basis for Contention NEPA 2.1 because Petitioners fail to (1) demonstrate that the issue is within the scope of this proceeding, or (2) provide fact or expert opinion to support the contention. 10 C.F.R. §§ 2.309(f)(1)(iii) and (v).

The use of reclaimed water is regulated under by the DEP and Turkey Point Units 6 & 7 will be required to comply with those rules. *See* F.A.C., FDEP rules 62-610, Part VII. In accordance with FDEP regulations (F.A.C. 62-610.668), MDWASD would be required to provide high-level disinfection of reclaimed water before industrial use by FPL in open cooling towers. ER at 3.3-1; 3.4-5. The reclaimed water treatment facility would be designed to further treat the reclaimed water from MDWASD prior to use in the circulating water system and would include pumps, trickling filters, clarifiers, deep bed filters, and solids-handling equipment to reduce the levels of iron, magnesium, oil and grease, total suspended solids, nutrients, and silica to usable levels for the circulating water system. ER at 3.3-1; 3.4-5.

Petitioners point to no provision in NEPA, 10 C.F.R. Part 51, or any NRC guidance that calls for an evaluation of the potential impacts from these undefined "contaminants" found in reclaimed water. Accordingly, Petitioners have provided no legal basis for contending that such an analysis is required and have not demonstrated that the issue is within the scope of this proceeding. 10 C.F.R. § 2.309(f)(1)(iii).

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Second, there is no credible pathway for radiological effluents to reach a receptor. *See* ER at 5.4-2. However, FPL considered a hypothetical scenario involving a conceptual receptor. *Id.* Under this scenario, FPL demonstrated that if an individual were continuously present in an unrestricted area, the dose from external sources would not exceed regulatory limits. FPL's analysis, discussed in Chapter 11 of its FSAR and in Chapter 5 of its ER, assumed a scenario that went beyond Part 20 requirements, and demonstrated that the underground injection of effluents from Turkey Point Units 6 & 7 would comply with Part 20 dose limits.

Under this hypothetical scenario, a drinking-water well would be drilled directly into the Boulder Zone near the Turkey Point plant property. *Id.* This scenario is extremely unrealistic, as it would involve an individual drilling as much as 1,000 feet past the base of the USDW, directly into the highly saline Boulder Zone to obtain water for drinking and agricultural purposes. ER at 5.4-2. Although unrealistic, this scenario bounds any other potential exposure scenarios that may conceivably occur, including the vertical migration from the Boulder Zone to potable water aquifers. ER at 5.4-2.

Using the NRC-endorsed LADTAP II computer program, FPL calculated doses to an individual from consumption of contaminated drinking water and from consumption of meats and vegetables produced with contaminated irrigation water (there are no milk animals within five miles of the plant). ER at 5.4-3. The resulting maximum doses per unit are 2.5 mrem to the total body, 2.4 mrem to the thyroid, and 3.1 mrem to the liver of

Petitioners also provide no fact or opinion showing what the actual impacts of these substances are. Petitioners fail to address issues such as the level of purification that can reasonably be achieved by the MDWASD, whether and under what circumstances these substances would interact with the environment. A contention that simply alleges that some general, nonspecific matter ought to be considered does not provide the basis for an admissible contention. *Rancho Seco*, LBP-93-23, 38 NRC at 246.

a child. Even though these doses are not due to normal operations, they nonetheless conform to the 10 C.F.R. Part 50, Appendix I guidelines of 3 mrem total body and 10 mrem organ, as well as to the 10 C.F.R. § 20.1302(b)(2)(ii) dose limits. ER at 5.4-3. Petitioners do not challenge these conclusions.

Petitioners do not cite, let alone dispute, these assessments. Instead, the Petition insists, contrary to fact, that FPL has not provided any information on radioactive effluents. Petition at 28. Such an unsupported statement does not give rise to a dispute with the Application on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(vi).

Petitioners allege that the ER omits a discussion of the cumulative impacts from radiological, chemical and various other substances. Petition at 28-30. This allegation cannot be the basis of an admissible contention as it completely ignores the fact that the Application contains a discussion of cumulative impacts and Petitioners do not show that additional analysis would lead to any different conclusions than those reached in the ER. Further, the environmental review mandated by NEPA is subject to a “rule of reason.” An application need not include all theoretically possible environmental effects arising out of an action, but instead the analysis may be limited to effects which are shown to have some likelihood of occurring. *See Vogtle ESP*, LBP-09-07, 69 NRC at 631 (citing *Shoreham*, ALAB-156, 6 AEC at 836.).

Potential cumulative impacts are addressed in ER Section 5.11. That section summarizes the potential cumulative adverse environmental impacts to the region. This evaluation of cumulative impacts is based on a comparison between the existing

environmental conditions presented in ER Chapter 2³³ and the potential adverse environmental impacts of construction and operation detailed in ER Chapters 4 and 5, respectively.

Lastly, Petitioners have presented no expert or factual information to call into question the reasonable scoping and conclusions in the ER. No support is provided for the allegation that the type of analysis requested by the Petitioners would reach a different conclusion, or that allegedly-toxic or radioactive discharges would cause any impacts that were not considered. Thus, Contention NEPA 2.1 provides no support for its assertions and fails to find fault with the actual contents of the Application. For the above reasons, the proposed Contention is inadmissible.

11. Contention NEPA 2.2 - Impacts associated with the construction of pipelines

The ER fails to discuss the impacts associated with the construction of pipelines to convey the reclaimed waste water to the plant's waste water treatment facility.

FPL Response

Contention 2.2 alleges that the ER does not discuss environmental impacts on wetlands from the construction and operation of pipelines that will carry reclaimed water to the proposed site. Petition at 30-31. Contention NEPA 2.2, however, completely ignores the discussion of impacts from the proposed pipeline in the ER. *See, e.g.,* ER §§ 2.2.2.3 “Makeup and Potable Water Systems”, 4.1.2.4 “Makeup and Potable Water Systems”, 4.2.1.2.3 “Reclaimed Water Pipelines and FPL Reclaimed Water

³³ The environmental “baseline” described in ER Chapter 2 necessarily takes into account the condition of the Biscayne Bay that is currently impacted by all existing reactor units. Petitioners have provided no basis to support a claim that any toxic or radiological conditions were improperly described in the ER or to support that, if they were not addressed at all, addressing those conditions in the ER would have yielded a different result.

Treatment Facility”, 4.2.2.2.2 “Offsite Areas”, 4.3.1.2.1 “Reclaimed Water Pipelines”, 4.3.2.3.1 “Reclaimed and Potable Water Pipelines”.

Petitioners do not challenge these ER descriptions. Instead, they cite requests for additional information from agencies involved in the State review of the Turkey Point project under the PPSA and quotes from FPL’s SCA. Petition at 30-31. For the reasons discussed earlier, the requests for additional information by State agencies are not material to the adequacy of the ER. Moreover, Petitioners’ statements that impacts related to the pipeline are not addressed in the ER are simply not true. Therefore, Petitioners have failed to raise a material issue within the scope of this proceeding and the contention must not be admitted. 10 C.F.R. § 2.309(f)(1)(vi).

With regard to impacts from the pipeline, the ER states:

The use of reclaimed water would require constructing delivery pipelines from the Miami-Dade Water and Sewer Department (MDWASD) South District Wastewater Treatment Plant (SDWWTP) and an FPL reclaimed water treatment facility located on the Turkey Point plant property to treat the reclaimed water received from the Miami-Dade system. The location for the reclaimed water pipelines is from the SDWWTP located north of the Turkey Point plant property.

The reclaimed water pipelines would cross water bodies including wetlands, the Florida City Canal, the L-31E Canal, the North Canal, the Military Canal, the Princeton Canal (C-102), the Goulds Canal, and the Black Creek Canal (C-1).

Construction activities for the reclaimed water pipelines would be performed in accordance with the required local, state, and federal guidelines, permitting requirements and accepted industry practices for the pipelines and treatment facility construction. Constructing the reclaimed water pipelines and the FPL reclaimed water treatment facility would alter the surface water flow in the vicinity during construction activities. The pipelines and facility

excavation, the storage of excavated soils and/or spoils, stockpiling fill material, and the storage of equipment and supplies could impact surface water flow. Use of a stormwater detention basin would also alter the surface water flow.

Construction activities for the pipelines could result in vegetation loss and land disruption. As described in Section 4.3, the pipelines would be trenched beneath an existing access road on the west side of the corridor and, on completion, the disturbed portions of the corridor would be graded to the contours of the surrounding landscape and revegetated or returned to previous land uses. Clearing new corridors and/or expansion of existing corridors would include use of environmental best management practices to minimize impacts to surface waters.

Dewatering could be required during the excavation of the pipelines and the FPL reclaimed water treatment facility. Disposal of the water after it passes through a detention basin could alter the surface drainage downstream of the detention basin. However, impacts would be temporary. The disturbed areas would be recontoured and restored to preconstruction conditions. The disturbance would be short term. Impacts to surface water from hydrologic alteration would be SMALL and would not require additional mitigation other than those described above.

Construction activities could also alter the groundwater flow locally because of the excavations and foundation for the pipelines and treatment facility. The alteration would be permanent, although local to the construction activity. Dewatering activity during construction would also impact groundwater flow local to the pipelines and facility foundation. Alteration to groundwater flow would be temporary and local to the activity. Therefore, impacts from hydrologic alteration because of construction activities along the reclaimed water pipelines and at the FPL reclaimed water treatment facility would be SMALL and would not warrant mitigation other than those required by permit or identified above.

...

Shallow groundwater dewatering may be required during construction of new transmission towers, the reclaimed water pipelines, and new potable water pipelines. During any required dewatering activities along the transmission

lines and water pipelines, surface water flow could be affected because of the release of groundwater to the ground surface or to nearby surface water bodies. As a mitigative measure, sheet piles could be used to limit the extent of potential impacts to surrounding areas where needed. Water from potential dewatering activities along the corridors could be released to a detention pond, surface pool, or other type of sediment trap before the release to a permitted outfall under any required NPDES permit requirements and SWPPPs for the construction activities. Therefore, impacts to groundwater along the transmission corridors and pipelines from dewatering activities would be SMALL.

Based on these considerations and their localized and temporary effects during dewatering, groundwater use impacts from construction activities would be SMALL and would not warrant additional mitigation.

ER at 4.2-18 to 4.2-19; 4.2-23. Additionally, the ER explains the reason why FPL selected the proposed pipeline route. For example:

Reclaimed water pipelines approximately 9 miles long would be constructed to carry water from the SDWWTP to Units 6 & 7. As described in Subsection 4.3.1.2.1, approximately 6.5 miles of the pipelines would be collocated with the existing Clear Sky-to-Davis transmission line right-of-way and adjacent road and canal rights-of-way. The corridor for the reclaimed water pipelines was selected to use, to the greatest extent practicable, existing infrastructure and minimize environmental impacts. Because of the SDWWTP location, the reclaimed water pipeline corridor would be located primarily within and/or adjacent to existing roads and FPL-owned rights-of-way. The reclaimed water pipelines would cross water bodies including wetlands, the Florida City Canal, the L-31E Canal, the North Canal, the Military Canal, the Princeton Canal (C-102), the Goulds Canal, and the Black Creek Canal (C-1). No significant natural surface water bodies would be crossed by the reclaimed water pipelines.

...

Because the pipelines would follow existing corridors along much of their lengths, and erosion and sedimentation would be minimized using environmental best management

practices (sediment screens, mulching, revegetation), no impacts to the mangrove rivulus or other aquatic resources would occur. Overall impacts to aquatic resources would be SMALL.

ER at 4.3-21 to 4.3-23 (describing the reason for the pipeline route selection and concluding that the pipeline would have small impacts on aquatic resources).

In light of the discussion above, Petitioners' allegations that the ER does not discuss impacts or route selection ring hollow. Contention NEPA 2.2 fails raise a dispute on a material issue of fact with the Application and must be rejected.

12. Contention NEPA 2.3 - The ER fails to discuss the impacts to CERP and BBCW associated with the use of reclaimed waste water to cool Turkey Point Units 6 & 7.

FPL Response

Contention NEPA 2.3 alleges that the ER does not address the adverse effect that the use of reclaimed water will have on CERP or the BBCW Restoration Project. Petition at 31. Petitioners assert that the ER does not discuss the impacts of using reclaimed water that "otherwise could be used to supply fresh water to the BBCW project." *Id.* at 32. The Petitioners conclude by claiming that the ER does not discuss "what other sources of water might be available as a guaranteed, reliable source for the BBCW restoration project." *Id.* Similar to Contention NEPA 2.2, Petitioners' allegations that the ER did not consider the various demands on the reclaimed water to be provided by Miami Dade County are simply not true. *See* ER at 5.2-16. Therefore, the Petitioners have again failed to raise a dispute with the Application as to a material issue of fact. Consequently, Contention NEPA 2.3 must not be admitted.

First, to the extent that Petitioners are arguing that the ER is insufficient because it has failed to address the impacts of the proposed project on another project, they have

not made an appropriate claim under NEPA. As discussed in the response to Contention NEPA 1.5, NEPA requires an evaluation of impacts of the proposed action on the environment, not its impacts on other projects. *See* 10 C.F.R. § 51.45(b)(1). In Contention NEPA 2.3, Petitioners are requesting that the NRC evaluate the impacts the proposed project on another project. NEPA does not require an assessment of the impact a project would place on another project; but, rather what impact the project under review would have on the environment (either directly, indirectly or cumulatively in light of other activities/projects in the area). In the instant case, the ER does present such an analysis. It analyzes the impacts that operation of the Units would have on the aquatic resources (e.g., Biscayne Bay) around it. *See* ER at 2.3-5, 2.3-12, 5.11-2, 5.11-5.

The ER describes the hydrological impacts of the construction and operation of Turkey Point Units 6 & 7 and its associated facilities in great detail. Both Chapter 4 (Environmental Impacts of Construction) and Chapter 5 (Environmental Impacts of Operation) of the ER include sections that describe hydrological impacts due to both onsite and offsite facilities. *See* ER 4.2.1 “Hydrologic Alterations”; and ER 5.2.1 “Hydrologic Alterations and Plant Water Supply.” Of particular relevance to Contention NEPA 2.3, Section 4.2 describes hydrological impacts due to: “Access Roads, Heavy Haul Road, Bridges, and Equipment Barge Unloading Area Improvements” (ER at 4.2-5), “Onsite Connector Transmission Corridors” (ER at 4.2-12), the offsite “Borrow Areas” (ER at 4.2-14), “Transmission Corridors” (ER at 4.2-14), “Reclaimed Water Pipelines” (ER at 4.2-18), and “Offsite Roads” (ER at 4.2-20). In these subsections, the ER describes the impacts to surface water and ground water that would result from the project. Chapter 5 contains similar discussion of hydrological impacts due to operations.

These descriptions of local hydrological impacts encompass hydrological impacts to the areas covered by CERP projects that are associated with the project.

If a showing of potentially adverse impacts on CERP projects from the construction and operation of Turkey Point Units 6 & 7 were relevant, Petitioners would need to explain how these impacts could occur in spite of FPL's compliance the limitations found in its federal, State, and local environmental permits. The CERP is a joint project of the DEP, the SFWMD, and the U.S. Army Corps of Engineers (ACOE), as well as other government agencies. These are some of the very same agencies that are currently reviewing FPL's SCA. Petitioners fail to explain how these agencies would endorse the construction of a nuclear power plant and associated facilities if they would have detrimental impacts on their own CERP projects. Indeed, Petitioners identify no mechanism by which the CERP projects will be adversely impacted by the issuance of a COL for Turkey Point Units 6 & 7.

In Contention NEPA 2.3, Petitioners also claim that FPL's ER is deficient because it fails to state that the use of reclaimed water for plant cooling will preclude the use of reclaimed water for certain other uses, such as Biscayne Bay restoration. As set forth below, this argument is without merit.

Contention NEPA 2.3 relies on Petitioners' claim that the MDWASD may not be able to provide a sufficient amount of reclaimed water to support both Turkey Point Units 6 & 7 as well as the Biscayne Bay Coastal Wetlands ("BBCW") Project, a component of the CERP. Petition at 32. The BBCW Project is a project undertaken by the SFWMD to restore the Biscayne Bay ecosystem and would include areas surrounding the Turkey Point units. ER at 2.3-12. The BBCW Project would provide overland water flow in a

13,600-acre area through the use of spreader canals and other structures. *Id.* This increased natural water flow is designed to improve the ecology of Biscayne Bay including its freshwater and tidal wetlands, nearshore bay habitat, marine nursery habitat, oysters, and the oyster reef community. *Id.* A review of FPL's ER shows that Petitioners' claim that the operation of Turkey Point Units 6 & 7 will reduce the amount of reclaimed water available for the BBCW Project is incorrect.

As discussed in the response to Contention NEPA 1.1, the SFWMD water use permit for Miami-Dade consolidated public water supply requires MDWASD to implement 170 mgd of reuse projects. *Id.* The water use permit only requires MDWASD to "work with FPL" to provide up to 70 mgd to FPL for nuclear projects. *Id.* The water use permit identifies other reuse projects, including 89.1 mgd of reclaimed water for the Biscayne Bay Coastal Wetlands Project. *Id.*

Thus, FPL's ER acknowledges the possibility that the MDWASD may be unable to provide sufficient water to supply each of the proposed projects. FPL's ER recognizes that:

If the largest reuse projects listed in the exhibit are met as projected, reclaimed water from the SDWWTP [South Dade Waste Water Treatment Plant] may not be sufficient to meet all of the water demand for the operation of Units 6 and 7. To compensate for this potential shortfall, a second source for makeup water would consist of radial collector wells that would withdraw saltwater from under Biscayne Bay.

Id. Therefore, contrary to the scenario postulated in Contention NEPA 2.3, supplying water to Turkey Point Units 6 and 7 will not adversely affect the BBCW Project.

Therefore, this aspect of Contention NEPA 2.3 also fails to show the existence of a *genuine* dispute with the Application, and Contention NEPA 2.3 does not meet the standards for contention admissibility.

13. Contention NEPA 3 - Impacts of constructing and operating the transmission lines associated with Units 6&7

The ER fails to adequately address the direct, indirect, and cumulative impacts of constructing and operating the transmission lines associated with Units 6&7 on wetlands (including the Everglades), wildlife (including wading birds, migratory birds, and federally endangered and threatened species), and CERP.

FPL Response

Contention NEPA 3 alleges that the ER failed to address a series of issues related to the proposed new transmission lines associated with Turkey Point 6 & 7. As discussed below, however, Contention NEPA 3 fails to establish a material dispute related to the findings that the NRC must make or to provide support for its assertions. *See* 10 C.F.R. § 2.309 (f)(1)(vi). Consequently, Contention NEPA 3 must not be admitted.

First, Contention NEPA 3 alleges that the “ER fails to discuss the direct, indirect, and cumulative impacts of constructing and operating the [proposed new] transmission lines” Petition at 33. Petitioners further allege that there is no discussion of impacts to wetlands “(including functional loss) impacts to sheet flow, impacts to vegetation, aquatic species ..., birds ..., and other fauna.” *Id.* at 34. Also, Petitioners claim that the ER fails to discuss impacts on wood storks, eastern indigo snakes, and the Florida panther. *Id.* at 34. Petitioners then go on to claim that there are “no surveys . . . of indigo snakes” discussed in the ER. *Id.* Petitioners also argue that there is no discussion of visual impacts from the proposed transmission lines. *Id.*

Impacts to Wetlands and Aesthetic Impacts

Even a cursory review of the COLA reveals that Petitioners' claims are not grounded in a review of the Application. For example, with regard to the assertion that the ER does not address wetland impacts or visual impacts, the petitioner ignores the plain text of the COLA. In ER Section 4.4.1.3, FPL describes the expected aesthetic impacts to the resources surrounding the proposed transmission lines. *See* ER at 4.4-5 to 4.4-7. After discussing both main transmission corridors proposed by the project (i.e., east and west corridors) the ER concludes that "the presence of these new [transmission] lines [in the east or west corridors] would have a SMALL impact and would not warrant additional mitigation measures." *Id.* at 4.4-6, 4.4-7 (emphasis in original). Clearly, the ER describes the expected aesthetic impacts and concludes that the impacts would be small. Since the Petitioners ignore the ER's analysis and fail to allege any deficiencies in the ER, the contention must be rejected. *See, e.g., Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), LBP-04-15, 60 NRC 81, 95-96, *aff'd* CLI-04-36, 60 NRC 631 (2004); *Shearon Harris*, LBP-82-119A, 16 NRC at 2076; *Catawba*, LBP-82-107A, 16 NRC at 1804; *Limerick*, LBP-82-43A, 15 NRC at 1504-05.

Additionally, Petitioners claim that no discussion is presented in the ER regarding impacts to wetlands. Petition at 33. Contrary to Petitioners' assertions, the ER addresses impacts to wetlands as a result of the proposed transmission lines. For example, the ER states:

[a]lthough impacts to wetlands could potentially occur, they would be limited by careful siting and construction practices to avoid and minimize adverse effects. Where wetland impacts do occur, compensatory mitigation, as required by state and federal agencies, would be provided. Given the careful consideration of land use in the route

selection process (Subsection 2.2.2) and the availability of a viable method for mitigation, impacts to offsite land use would be SMALL.

ER at 4.1-7. Petitioners fail to challenge the ER's finding that compliance with state and federal requirements will ultimately lead to small impacts, if any.

Moreover, there is an extensive discussion of construction practices to be employed during the construction of the transmission lines in Section 4.2.1.2.2 of the ER. ER at 4.2-14 to 4.2-18. With regard to wetlands, the ER states that FPL would use "restrictive land-clearing processes in forested wetland areas" and "turbidity screens and erosion-control devices in areas of wetlands and water resources." ER at 4.1-6; 4.2-15. Section 4.2.1.2.2 further concludes that impacts from transmission-related construction would be small. ER at 4.2-18. Once in use, the proposed transmission rights-of-way would have to be maintained. The ER also addresses the reasonably foreseeable impacts from those operational activities on surface water and groundwater resources. *See* ER at 5.2-13. In relevant part, the ER states:

Potential operational impacts along the offsite portions of the proposed transmission rights-of-way would be similar to the segments on the Turkey Point plant property. During operations, potential impacts from maintaining hydrologic flow could occur. As described in Section 3.7, FPL regularly inspects the transmission lines. Vehicular traffic could result in the rutting of the access roads along the rights-of-way, which could impact surface flow in the vicinity of the disturbances. Should soil disturbance be required during maintenance operations within the rights-of-way, silt fence technology would be used to minimize impacts to nearby surface waterbodies/drainage features.

To reduce the potential for erosion through surface water runoff, areas of disturbed soils would be repaired, areas recontoured, and vegetative cover reestablished, if necessary, in a timely manner. Accordingly, impacts to hydrologic flow from operation of the offsite transmission

lines would be SMALL and would not require further mitigation.

...

It could be necessary to perform maintenance that would require excavating and dewatering along the transmission lines. The dewatering activity could create temporary drawdown of the water table. Dewatering could impact areas off the right-of-way. However, the water table and flow would return to normal once dewatering ceased. Impacts to groundwater hydrologic flow from operation of the offsite transmission lines would be SMALL and would not require mitigation.

ER at 5.2-13. Petitioners, however, fail to point to any deficiencies in this analysis, which belies their assertion that the ER lacks any discussion of the impacts to wetlands as a result of new transmission facilities.

Impacts to Fauna

Contention NEPA 3 alleges that there is “no discussion” in the ER of impacts to endangered species. Nothing could be further from the truth. *Compare* Petition at 34 with ER at 2.4-1 to 2.-4-59 (detailing the various species present in areas that would host project features), 4.3-1 to 4.3-10 (discussing the environmental impacts of construction), 5.6-1 to 5.6-4 (enumerating the environmental impacts of operations), 6.5-1 to 6.5-4 (describing the monitoring programs employed during the pre-application, construction and operational phases of the project), 10.1-7 and 10.4-25 (comparing impacts to species found at various alternate sites). The ER provides an extensive discussion of the species in the area and the potential impacts on those species. For example, Section 2.4 of the ER presents over 60 pages of information, containing narrative, charts, maps and tables that, in exhaustive detail, present the ecology of the region that would host the facilities proposed by the Turkey Point Units 6 & 7 project. *See* ER at 2.4-1 to 2.4-59.

Petitioners particularly call out panthers, wood storks and indigo snakes³⁴ as species they allege are not addressed in the ER. *See* Petition at 34-35. Again, this is not the case. The ER provides a discussion of the impacts from construction and operation of the transmission corridors. First, Chapter 2 of the ER provides an ecological snapshot of the wood storks, indigo snakes and panthers:

Wood storks (*Mycteria americana*) are large wading birds that nest in trees and shrubs over water and forage on fish in shallow wetlands in the southeastern United States. They are federal and state-listed as endangered. They feed by touch, literally bumping into their prey, and thus require shallow wetlands relatively clear of vegetation in order to forage efficiently. They are seen in low numbers in the shallow portions of the industrial wastewater facility during the winter months. Three wood storks were observed foraging/roosting in shallow wetlands in the laydown area immediately west of the Units 6 & 7 plant area. They do not nest on or near the Turkey Point plant property but have historically nested in two colonies south of Tamiami Trail (U.S. Route 41) near (within 5 miles) the proposed Turkey Point-to-Levee transmission corridors. Portions of both corridors fall within the core foraging areas of both colonies (radius of 18.4 miles around each colony). Wood storks could also be found within aquatic habitats associated with the access roads, reclaimed water pipelines, and FPL-owned fill source. Critical habitat has not been defined for this species.

The Eastern indigo snake (*Drymarchon corais couperi*) is a federally threatened species that inhabits a variety of habitats in the southeastern United States from scrub and sandhill to wet prairies and mangrove swamps. Their existence is frequently linked to gopher tortoise populations

³⁴ Petitioners claim that there are “no surveys estimating the population of indigo snakes within the corridors.” Petition at 34. However, ER Chapter 6 describes that “[s]urveys for small mammals, reptiles, and amphibians on the Units 6 & 7 plant area and other project construction areas, were conducted in April 2009.” ER at 6.5-1. During these surveys, indigo snakes were not observed. ER at Table 2.4-2. This fact is not surprising since the species is considered endangered. Nevertheless, a survey was conducted and the indigo snake was not present. However, as reflected in the ER, FPL is aware of the species’ presence in the area and considered it presenting its analysis and conclusions in the ER. Therefore, this argument cannot serve as a proper basis for a contention. In the end, the Petitioners did not even state any deficiencies with FPL’s survey or why a different survey would be required or reach a materially different conclusion.

and use of their subterranean burrows. Indigo snakes have been observed south of the industrial wastewater facility in the Everglades Mitigation Bank (in 2004) and within an area south of SW 344th Street/Palm Drive, adjacent to the FPL child daycare facility (in 1981). Eastern indigo snakes could also be found within appropriate habitats found near the access roads, reclaimed water pipelines, FPL-owned fill source, and transmission corridors. Critical habitat has not been defined for the indigo snake.

* * *

The Florida panther (*Felis concolor coryi*) is a large, federally endangered cat that inhabits the Everglades region. Their population size within the region is estimated at fewer than 60 animals. They use a combination of upland hammocks and dense saw palmetto thickets and prey on deer and feral hogs. While there have been no confirmed sightings on the Turkey Point plant property, there have been more than 60 sightings of panthers over the last 20 years in the Everglades National Park (ENP) area crossed by the two alternative routes for the Clear Sky-to-Levee transmission corridor.

ER at 2.4-10 to 2.4-11. Then, ER Chapter 4 describes the potential impacts from construction on the species that occur along all proposed offsite project activities, including transmission. Section 4.3.1.4 summarizes the impacts from construction on species and states:

Construction activities would result in the permanent loss of some wetland habitats and the potential temporary disturbance to other wetland habitats. The temporary disturbance would be SMALL and mitigated by standard industry construction practices, but the impacts resulting from [Turkey Point Units 6 & 7] wetland loss would be MODERATE and may warrant mitigation. Impacts to other terrestrial resources, including “important” species (as defined by NUREG-1555), would be SMALL. However, given the location of the construction activities within the designated critical habitat of the American crocodile, the proximity to active breeding habitat, and the increased construction-related traffic on roads within the industrial wastewater facility, impacts to this species would

be MODERATE. Management/conservation plans would be implemented to avoid and/or limit the impacts of construction activities on protected species such as the crocodile and manatee.

ER at 4.3-14 to 4.3-15. Chapter 5 of the ER then discusses the impacts that would result from operations and concludes:

Based on the maintenance procedures established by FPL and the analysis of transmission system operation impacts on terrestrial resources the NRC completed for the GEIS (NUREG-1437), potential impacts associated with routine right-of-way maintenance activities on terrestrial resources would be SMALL. However, the presence of known populations of certain threatened and endangered species near these rights-of-way would result in agency consultations and possible mitigation actions, as discussed in Subsection 4.3.1.3.1.

ER at 5.6-4. The discussion above is ignored by Petitioners. A significant amount of information is presented in the ER and Petitioners have failed to raise any issues with its adequacy. They failed in their “ironclad obligation” to examine the record when framing their contentions. *See* Final Rule, 54 Fed. Reg. at 33,170. Petitioners’ unsupported claims do not provide an adequate basis for an admissible contention.

CERP

In Contention NEPA 3, as in Contention NEPA 2.3, Petitioners allege that the ER fails to consider the impacts of the new transmission lines to the CERP. As explained above, Petitioners arguments completely misapprehend the purpose of NEPA. NEPA’s basic requirement is that federal agencies consider the impacts of their actions *on the environment*. NEPA is not an environmental management statute that requires the assessment of an agency’s actions on other federal programs. At most, NEPA requires that the Commission consider what cumulative impacts the proposed action would cause

when considered together with other actions affecting the same environmental resources. This is precisely what the ER does in Section 4.7.2.1. Therein, the ER analyzes what the impacts would be from the FPL's new transmission lines, the CERP and other projects in the region. The ER states:

The [Everglades Mitigation Bank] would continue to preserve wetlands and would not contribute or detract from surface water and water use impacts. The purpose of the CERP projects is to make beneficial hydrologic alterations that would have large beneficial surface water impacts. The Princeton-Turkey Point 230 kV line would be constructed using environmental best management practices, including erosion-control devices, matting to reduce compaction caused by equipment, use of wide-track vehicles when crossing wetlands, and restoration activities after construction. FGT plans to cross canals along the route using the horizontal directional drill method where the pipeline is placed beneath the water body, minimizing impacts. Both the Princeton-Turkey Point 230 kV line and the FGT pipeline would be constructed early in the Units 6 & 7 construction schedule and any impacts would be temporary and localized. Accordingly, the cumulative impacts to surface water would be positive and LARGE owing to the EMB and CERP projects. The hydrologic alterations resulting from construction of Units 6 & 7 would be only a SMALL detractor to this overall beneficial impact of restoring wetlands in the area.

ER at 4.7-5 to 4.7-6. Since, as demonstrated above, the ER presents an analysis of the cumulative impacts of the new transmission lines, the CERP, and other projects, Contention NEPA 3's allegations regarding CERP do not give rise to an admissible contention.

For the various reasons discussed above Contention NEPA 3 is inadmissible.

14. Contention NEPA 4 - Direct, indirect, and cumulative impacts of constructing and operating the access roads associated with Units 6&7

The ER fails to adequately address the direct, indirect, and cumulative impacts of constructing and operating the access roads associated with Units 6&7 on wetlands and wildlife.

FPL Response

Although alleging that the discussion of access roads in the ER is inadequate,³⁵ Contention NEPA 4 is actually a contention of omission. The specific allegations set forth therein are that the ER “fails to consider” certain impacts (the disruption of ecological corridors, disruption of sheetflow, degradation of conservation lands, increased road-kill, increased colonization of invasive/exotic plant species, and increased dumping and all-terrain vehicle use), contains “no information” “regarding the potential overlap of wildlife corridors with the proposed access roads,” contains “no information on types of species that would be affected by overlap with wildlife corridors,” contains “no discussion and analysis of the impacts to the species as a result of the construction and operation of access roads,” and contains “no discussion of impacts to reptiles of construction and operation of the access roads.” Petition at 36-38. According to Petitioners, these omissions render the ER inadequate. The contention is inadmissible because it provides no factual support for the claims it makes and fails to show that a genuine dispute exists with the Application on a material issue of law or fact, contrary to the requirements of 10 C.F.R. §§ 2.309(f)(1)(v) and (vi), since the allegedly missing information is in fact contained in the ER.

³⁵ See Petition at 36 (“The ER fails to *adequately discuss and analyze* the impacts associated with the construction and operation of access roads.”) (emphasis added).

(i) Contention NEPA 4 fails to provide the factual support required by 10 C.F.R. § 2.309(f)(1)(v)

The Contention repeatedly (and exclusively) cites in support of its claims the MDC's Third Completeness Comments (Petition Exhibit 3). That document, however, fails to provide the claimed support for the allegations in the Contention.

First, as discussed above, requests for information from State agencies do not in themselves provide adequate support for contentions in an NRC proceeding. Here, the MDC's Third Completeness Comments contain no conclusions and make no ultimate determinations as to the likely impacts that would be caused by the construction and operation of the access roads. The mere posing of such questions does not suggest that FPL's Application is deficient; instead it is only part of an ongoing dialogue between Miami-Dade County and FPL, not unlike the dialogue between the NRC Staff and an applicant via RAIs. *See Oconee*, CLI-99-11, 49 NRC at 336-37.

In addition, even if taken at face value, the MDC's Third Completeness Comments do not support Petitioners' claims. Petitioners, for example, cite the MDC's Third Completeness Comments for their claim that construction and operation of the access roads “*will* cause the disruption of ecological corridors, disruption of sheetflow, degradation of conservation lands (due to the disruption of management activities from access limitations), increased road-kill, increased colonization of invasive/exotic plant species, and increased dumping and all terrain vehicle/off road vehicle use (by providing access opportunities for unauthorized persons).” Petition at 37 (emphasis added). Although Petitioners represent that the document identifies adverse environmental effects that *would occur* if the access roads were constructed and operated, the MDC's Third Completeness Comments make no such prediction. The document simply requests

additional information in order to evaluate FPL's application to the State of Florida for certification of the Turkey Point site. *See* MDC's Third Completeness Comments at 1, 39 ("The following comments indicate the additional information necessary for the County to determine if the quality and quantity of the information provided by [FPL] is sufficient to conduct an evaluation of their Site Certification Application (SCA)... . Construction and operation of non-transmission linear facilities, including but not limited to construction access roads, *may have* an adverse impact on adjacent and nearby EEL lands") (emphasis added).

Because the document does not reach the conclusions which Petitioners attribute to it, it provides no support for the claims made in the contention.

(ii) Contention NEPA 4 does not demonstrate a genuine dispute with the Application on a material issue of fact or law

In addition to lacking factual support, Contention NEPA 4 fails to show a genuine dispute with the Application on a material issue of fact or law. As stated above, Contention NEPA 4 is contention of omission. The proponent of any contention that claims an application fails to address a particular issue must explain in his petition why the application is deficient by showing that the alleged omissions from the application are indeed not there and are significant. *See System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-04, 61 NRC 10, 13 (2005); Final Rule, 54 Fed. Reg. at 33,170.

Contention NEPA 4 fails to show a genuine dispute with the Application, however, because the information which is alleged to have been omitted is actually included within the ER. Petitioners have failed to acknowledge – let alone allege any

fault with – the portions of the ER containing the information they mistakenly allege was omitted. Petitioners cannot establish a genuine dispute with the Application by ignoring the contents of the ER. *See Millstone*, LBP-04-15, 60 NRC at 95-96; *Shearon Harris*, LBP-82-119A, 16 NRC at 2076; *Catawba*, LBP-82-107A, 16 NRC at 1804; *Limerick*, LBP-82-43A, 15 NRC at 1504-05.

Contrary to Petitioners' claims, the Application contains detailed information about the proposed access roads for the environmental impacts of such roads on wetlands and wildlife to be assessed as required under NEPA. *See, e.g.*, ER Chapters 2, 4, 5, and 10.

With respect to the impacts of constructing and operating the access roads on wetlands, the ER states that the land “within the vicinity of Units 6 & 7,” including the land on which access roads will be constructed, “is predominantly wetlands and forestland.” ER at 4.1-4. As a result, the access roads will “cross a variety of land use types, including various kinds of wetlands (marshes, forested wetlands, and canals).” ER at 4.3-1. It notes that construction of the access roads (which will total approximately 10.8 miles of road expansion and improvements)³⁶ would “impact approximate[ly] 70 acres of land that would not be available for other uses. However, the locations of the road improvements were selected to use, to the greatest extent practical, existing roadways to minimize environmental impacts.” ER at 5.1-5. The ER states that the access road construction activities will be confined to existing roads to reduce potential environmental impacts as much as possible. *See* ER at 2.4-16 (“The roadway

³⁶ *See* ER at 2.4-5 to 2.4-6 (“A total of 10.8 miles of roadway expansions and improvements would be needed...These improvements would be located adjacent to and along existing roads, transmission rights-of-ways, and canals. The access roads would traverse existing roadways, maintained grasses, agricultural lands, various wetland habitats, and upland forests”).

improvements would involve widening of existing paved roads and paving existing unpaved roads”); *see also* ER at 2.2.-21, 4.1-9, 4.3-8, and 4.1-10 (“The locations for the road improvements were selected to use, to the greatest extent practicable, existing roadways and to minimize environmental impacts”).

Similarly, ER Table 2.2-7 indicates that wetlands make up a substantial portion of the land use acreage in the area of the planned access road improvements, and ER Section 4.3.1.1.4 addresses the impacts to wetlands, including impacts from construction and operation of the access roads. *See* ER at 2.2-34 and ER at 4.3-8. The ER also states that a section of one of the main access roads, 359th Street, “would cross wetlands,” and as a mitigative measure “[c]ulverts would be used to maintain current natural flow patterns in the area.” ER at 4.2-6. Section 4.3.1.4 of the ER concludes that “[c]onstruction activities [including development of access roads] would result in the permanent loss of some wetland habitats and the potential temporary disturbance to other wetland habitats. The temporary disturbance would be SMALL and mitigated by standard industry construction practices, but the impacts resulting from wetland loss would be MODERATE and may warrant mitigation.” ER at 4.3-14 to 4.3.-15. *See also* ER at 4.3-9 (“approximately 330 acres of wetlands habitats would be impacted...impacts of construction on wetland habitats would be MODERATE”).

Considering these direct, indirect, and cumulative impacts upon wetlands that may result from the construction and operation of the access roads, the Application also discusses specific mitigative measures which will be taken to avoid and reduce such impacts. For example, “[c]onstruction/expansion of the roadways would follow the design standards of [DEP] and the Miami-Dade County Public Works Department.” ER

at 4.3-8; *see also* ER at 4.1-11; ER at 4.3-25. Construction activities would follow environmental best management practices, including “the installation of silt fences, removal of vegetation, construction of drainage, removal of unsuitable soils, placement of road base materials, laying layers of asphalt, and striping. The shoulders would be appropriately sloped and surface water runoff would be managed with the installation of swales and culverts at suitable locations.” ER at 4.1-11. Other best management practices would also be used to “reduce impacts to water and wetlands,” such as use of “floating turbidity curtains” and the installation and placement of culverts “to maintain hydrologic flows through the area, based on hydrologic studies. Unavoidable wetland impacts resulting from roadway improvements would be mitigated in consultation with [Florida Department of Environmental Protection] and USACE”. ER at 4.3-8. *See also* Table 4.6-1 at 4.6-4 (“Access road improvements would include the following installation of silt fences, shoulders would be appropriately sloped, and surface water runoff would be managed with the installation of swales and culverts at suitable locations”); ER 4.3-25 (“Unavoidable wetland impacts resulting from construction of roadway improvements would be mitigated in consultation with the [DEP] and USACE”). In addition, the ER further states that FPL will “[u]se equipment that minimizes environmental impacts such as erosion-control devices, mattings, and wide-track vehicles when crossing wetlands” in order to avoid and mitigate impacts to wetlands from construction activities associated with the access roads. ER at 10.1-4.

Thus, FPL would use a “three-pronged approach to wetland mitigation.” ER at 4.3-9. As described above, “[t]he first option would be active mitigation (e.g., creation of crocodile habitat, establishment of culverts under existing roadbeds to allow sheet flow of

water, etc.). The second option would be ‘land swapping’ (e.g., providing relatively natural land as a preserve, etc.). The third option would be purchase of wetland credits from the Everglades Mitigation Bank.” *Id.*; *see also* Table 4.6-1 at 4.6-6 (“Impacts to wetlands would be mitigated by active mitigation (e.g. installation of culverts under existing road beds to allow sheet flow of water), ‘land swapping’, and/or purchase of wetland credits from the Everglades Mitigation Bank or other regional mitigation opportunities”).

Because such mitigation measures will be undertaken, and “[b]ecause the roadway improvements would occur in areas that are already disturbed by human activity and existing infrastructure,” the ER concludes that “land use impacts from the improvements associated with the construction of Turkey Point Units 6 & 7 would be SMALL [with the exception of impacts to wetlands, which would be MODERATE as described above] and not require additional mitigation [with the exception of impacts to wetlands, which would warrant mitigation as described above].” ER at 4.3-25 & 4.1-11. Contrary to the allegation made by Petitioners, (*see* Petition at 37), this conclusion is not unsupported, but rather is based upon the extensive consideration given in the ER to the impacts from construction and operation of the access roads.

Petitioners do not challenge the adequacy of those parts of the ER. Because they have not done so, their allegation that the ER concludes “without any support or analysis” that impacts from the improvements associated with the construction of Turkey Point Units 6 & 7 will be SMALL and neglects to adequately consider impacts to wetlands from the access roads fails to demonstrate a genuine dispute with the Application on a material issue.

Likewise, the ER considers the impacts of constructing and operating the access roads on wildlife. For instance, ER Section 2.4.1.1 reports that surveys have been performed to identify wildlife around the Turkey Point plant property that may be affected by construction and operation of the access roads. *See, e.g.*, ER at 2.4-7 and 2.4-8 (“Approximately 90 species of birds have been observed on or near the Turkey Point plant property and associated transmission corridors during surveys from 1972 and more recent surveys (2005-2009)...Surveys for reptiles, excluding American crocodiles, and amphibians occurred from April 13-16, 2009 and employed coverboards, minnow traps, dip nets, and pedestrian searches...Planned construction areas were searched during approximately 1,000 minutes of pedestrian surveys (all areas combined). The April 2009 survey efforts documented four species of snakes, three species of lizards, three species of amphibians, and one species of turtle...Wildlife species found within the Turkey Point plant property are common to the region and would be expected to be found in off-site project areas associated with Turkey Point Units 6 & 7 [including access roads]”). Figure 2.4-3 depicts the locations of some of these recent wildlife surveys on the Turkey Point plant property, and Table 2.4-2 identifies wildlife species observed nearby, including reptiles. As described below, the ER also discusses and analyzes the impacts which construction and operation of the access roads may have on particular wildlife species, as well mitigation measures that may be undertaken to protect such species. Once again, Petitioners fail to address these sections of discussion in the ER. They have not, therefore, raised a litigable dispute with the Application.

Petitioners allege that there is “no information in the ER regarding the potential overlap of wildlife corridors with the proposed access roads.” Petition at 37. However,

the ER specifies precisely where the access road improvements will be constructed, thus making it possible to determine whether there is any overlap with wildlife corridors, should the NRC determine it necessary to do so in order to prepare the EIS. *See, e.g.*, ER at 4.1-10 (“The improvements for the existing paved roadways consist of the widening from two lanes to four lanes of SW 328th Street/N. Canal Drive, SW 344th Street/Palm Drive, and SW 117th Street, for a total roadway length of approximately 3.25 miles. Development of the four new paved roadways include (with approximate lengths): SW 359th Street at two locations, three lanes between SW 137th Avenue/Tallahassee Road and SW 117th Avenue (2 miles in length) and four lanes between SW 117th Avenue and Turkey Point Units 6 & 7 (3 miles in length), plus construction of a bridge over the L-31 Canal; three lanes at SW 137th Avenue/Tallahassee Road between SW 344th Street/Palm Drive and SW 359th Street (1 mile in length); and four lanes at SW 117th Avenue between SW 344th Street/Palm Drive and 359th Street (1 mile in length)”); *see also* Figure 3.9-1 (Sheet 4 of 4) at 3.9-22. The Petition ignores this information; thus, its claim that the Commission cannot determine whether the access roads will cross through wildlife corridors fails to demonstrate a dispute with the Application.

Petitioners go on to assert that the Application “contains no information on types of species that would be affected by overlap [of the access roads] with wildlife corridors, including state listed and federally listed endangered species such as the Eastern Indigo Snake and Florida Panther,” that there is “no discussion and analysis of the impacts to these species as a result of the construction and operation of access roads,” and that “there is no discussion of impacts to reptiles of construction and operation of the access roads.” Petition at 37, 38. The ER, however, does discuss the impacts which the

construction and operation of the access roads may have on such species, including reptiles. For example, crocodiles, wood storks, and eastern indigo snakes are each specifically identified as a listed species that may be found within aquatic or other appropriate habitats along the access roads. *See* ER at 2.4-10. Similarly, “wading bird species were observed during 2008-2009 reconnaissance...and all wading bird species could possibly use appropriate wetland habitats associated with the access roads.” ER at 2.4-12.³⁷ In addition, the ER states that “Florida panthers could possibly occur in more remote areas along the access roads. Disturbance during construction would be temporary, [but] the activity could possibly result in habitat loss and increased traffic could pose a mortality risk to panthers.” ER at 4.3-14.

For the crocodile, the ER states that segments of the access roads may be classified as critical habitat for the animal. ER at 2.4-13. In addition, the access road improvements for 359th Street are acknowledged to potentially “pose a threat to crossing crocodiles” for “[a]lthough the affected land is considered of marginal quality for the crocodile, it is still considered ‘potential’ habitat.” ER at 4.3-5. *See also* Table 4.6-1 at 4.6-6 (Traffic “may pose a threat to crocodiles crossing this road”) and Table 10.1-1 at 10.1-7 (“Traffic on access road at the north end of the cooling canals of the industrial wastewater facility may pose a threat to crocodiles crossing this road”). For the access roads along with other plant construction, the ER states that “given the location of the construction activities within the designated critical habitat of the American crocodile,

³⁷ *See also* ER at 4.3-14 (“Wildlife species within the areas impacted by [construction of the access road expansions] would be those typical to southern Florida. Listed species would likely include wading birds (e.g., egrets, ibis, and possibly storks) and possibly crocodiles in adjacent wetland habitats and plants within the SW 359th Street corridor...Given that mobile species (birds and crocodiles) would likely move to nearby similar habitat and plant species found in this habitat tend to be those that inhabit disturbed soils, impacts of these projects on wildlife species would be SMALL”).

the proximity to active breeding habitat, and the increased construction-related traffic on roads within the industrial wastewater facility, impacts to this species would be MODERATE.” ER at 4.3-15.

Contention NEPA 4 also charges that the ER improperly omits a “discussion of whether certain wildlife protection measures could be incorporated into the design of the roads to protect [wildlife] species.” Petition at 37-38. It faults the ER for “fail[ing] to consider the implementation of wildlife protection measures such as fencing, signage, reduced speed limits and wildlife underpasses to eliminate or minimize mortalities from road-kill.” Petition at 38. However, the ER does include such a discussion of mitigative measures that would be incorporated into the construction and operation of the access roads to protect wildlife species. For instance, the ER provides that “[p]roject-specific management plans for crocodiles and other listed species have been created by FPL for all recent facility additions and would be created for this construction activity as well. These management plans include monitoring for species occurrence and mitigation measures.” ER 4.3-5. *See also* ER at 4.3-15 (“Management/conservation plans would be implemented to avoid and/or limit the impacts of construction activities on protected species such as the crocodile”); Table 4.6-1 at 4.6-6 (“A project-specific management plan for crocodiles and other listed species has been created for this construction activity. Mitigation measures may include warning signs and education material (for construction personnel) as to the presence and status of crocodiles and restrictions of nocturnal activities”).³⁸

³⁸ Warning signage is a wildlife protective measure which Petitioners erroneously allege the ER entirely failed to consider. *See* Petition at 38.

One of the protection measures that the Petitioners inaccurately allege was not considered by the ER, the creation of wildlife underpasses, is also discussed. For example, the ER states that “[t]o mitigate for hazards associated with increased traffic on the road between the northern end of the industrial wastewater facility and the test canals, four wildlife underpasses would be installed to allow safe travel between the two sites.” ER at 4.3-5. *See also* ER Table 4.6-1 at 4.6-6 (Traffic “may pose a threat to crocodiles crossing this road and would be mitigated by installation of a wildlife corridor to provide pathways to for crocodiles to travel between wetlands on either side of this road”); ER Table 10.1-1 at 10.1-7 (“Traffic on access road at the north end of the cooling canals of the industrial wastewater facility may pose a threat to crocodiles crossing this road and would be mitigated by installation of a wildlife corridor to provide pathways for crocodiles to travel between wetlands on either side of this road”). Similarly, with respect to the Florida panther, the ER states that “impacts to the panther of access road expansion would be SMALL, but would likely warrant discussions with regulatory agencies concerning possible mitigation measures such as habitat enhancement or purchase of panther mitigation credits.” ER at 4.3-14.

The ER further considers that one potential measure which may be taken to protect wildlife is the removal of some of the access road improvements after the plant has been constructed. *See* ER at 5.1-5 (“Roadway improvements installed during construction could be removed during operation...Impacts to terrestrial and aquatic flora and fauna, including possible interactions with crocodiles and panthers along remote sections, would be reduced by removal of the road and reduction/cessation of traffic flow”).

As described above, Contention NEPA 4 fails to demonstrate a genuine dispute with the Application because it alleges information has been omitted from the ER which is actually included therein.

Contention NEPA 4 is inadmissible.

15. Contention NEPA 5 - Failure to adequately address reasonable alternatives to transmission line corridors and impacts to wetlands

The ER fails to adequately address (1) all reasonable alternatives to the proposed transmission line corridors and associated access roads, and (2) how the applicant will avoid and/or minimize impacts to wetlands caused by construction and operation of these transmission line corridors and associated access roads.

FPL Response

In Contention NEPA 5 Petitioners make two separate allegations as to why they contend the ER's discussion of the impacts of constructing transmission line corridors and the associated access roads is inadequate. First, Petitioners allege that the ER fails to adequately address how FPL will "avoid and/or minimize impacts to wetlands caused by construction and operation of [the proposed] transmission line corridors and associated access roads." Petition at 38. Second, Petitioners allege that the ER fails to adequately address "all reasonable alternatives to the proposed transmission line corridors and associated access roads." *Id.* Contention NEPA 5 is inadmissible because neither claim raises a genuine dispute with the Application on a material issue of law or fact, contrary to the requirement of 10 C.F.R. § 2.309(f)(1)(vi).

(i) The ER Contains Information, Which Petitioners Fail to Dispute, Addressing Wetlands Mitigation

Petitioners assert that the ER “fails to discuss and analyze any specific impacts of transmission line corridor and access road construction on wetlands,”³⁹ and fails to “discuss mitigation of the impacts caused by transmission line corridor and access road construction on wetlands.” Petition at 41, 43. The contention faults the ER for “appear[ing] to rely on conceptual mitigation plans to avoid having to discuss how environmental impacts from transmission line and access road construction could otherwise be avoided or minimized,” asserting that the “ER states only that a three-pronged approach to mitigation would be used: active mitigation, ‘land swapping,’ and the purchase of wetland credits from the Everglades Mitigation Bank” without “elaborat[ing] on any one of these.” Petition at 43.

These claims fail to raise a genuine dispute with the Application, however, because the information which Petitioners allege has been omitted from the ER is actually contained within that document. Petitioners cannot show a genuine dispute with the Application by neglecting to read, ignoring, or misstating the contents of the ER. *See Millstone*, LBP-04-15, 60 NRC at 95-96; *Shearon Harris*, LBP-82-119A, 16 NRC at 2076; *Catawba*, LBP-82-107A, 16 NRC at 1804; *Limerick*, LBP-82-43A, 15 NRC at 1504-05.

Contrary to Petitioners’ accusations, the ER includes a discussion of the impacts to wetlands that may result from the construction and operation of the proposed

³⁹ To the extent Contention NEPA 5 alleges that the ER fails to adequately discuss potential impacts to wetlands from construction and operation of the transmission lines – rather than describe the mitigation measures to reduce such impacts – the allegations are addressed in FPL’s response to Contention NEPA 3 (which charges, among other things, that the “ER fails to adequately address the direct, indirect, and cumulative impacts of constructing and operating the transmission lines associated with Units 6 & 7 on wetlands”). Petition at 32.

transmission lines⁴⁰ and the measures that may be taken to avoid or mitigate such impacts. For the proposed transmission line corridors and associated access roads, the ER describes the percent of current land use which is comprised of wetlands. *See* ER at 2.2-15 to 2.2-16; Table 2.2-2 (showing wetland land use acreages along the proposed transmission corridors); Table 2.2-4 (showing wetland land use acreages along transmission line access corridors); ER at 4.1-5 to 4.1-6. ER Section 2.4.2.8 describes the acres of wetlands that would be crossed by particular segments of the proposed transmission line corridors. The ER recognizes that “FPL will be required by the [DEP] and the U.S. Army Corps of Engineers to avoid and minimize [impacts to wetlands] to the extent practical, and where impacts are unavoidable, to mitigate the value and functions of any wetlands disturbed by construction.” ER at 5.6-3. To satisfy this requirement, the ER describes FPL’s “three-pronged approach” to wetlands mitigation, including in Section 4.3.1.1.4: “The first option would be active mitigation (e.g., creation of crocodile habitat, establishment of culverts under existing roadbeds to allow sheet flow of water, etc.). The second option would be “land swapping” (e.g., providing relatively natural land as a preserve, etc.). The third option would be purchase of wetland credits from the Everglades Mitigation Bank.” ER at 4.3-9; *see also* Table 4.6-1 (Sheet 4 of 9) at 4.6-6.

The ER goes on to elaborate on these options. With respect to the primary option of active mitigation, the ER explains that numerous techniques would be employed to avoid or reduce impacts to wetlands from the construction of the proposed transmission lines and associated access roads. For example, Section 2.4 of the ER states that a land

⁴⁰ *See, e.g.*, FPL’s response to NEPA Contention 3.

exchange has been proposed by FPL to avoid and reduce potential wetlands impacts from the construction of the transmission lines and associated access roads. The northern section of the Clear Sky to Levee transmission line “crosses the eastern portion of the [Everglades National Park]. A likely alternative to impacting the [Everglades National Park] (West Option) follows the same corridor from Turkey Point, but shifts east to border the [Everglades National Park] (East Option) rather than cross it. A land exchange has been proposed to relocate the approximately 8-mile-long segment of this corridor within the [Everglades National Park] to the periphery of the park.” ER at 2.4-6 (citations omitted). In addition, numerous other mitigation measures would be used in the construction and operation of the transmission line corridors, including:

- Use of restrictive land-clearing processes in forested wetland areas (right-of-way clearing and preparation)
- Use of turbidity screens and erosion-control devices in areas of wetlands and water resources (access road/structure pad construction)
- Use of existing access roads for ingress and egress to rights-of-way where available (access road/structure pad construction) [and]
- Use of standard industry construction practices for foundation and structure excavation and construction (line construction).

ER at 4.1-6; *see also* ER at 4.2-15.⁴¹ In addition, “[s]tandard industry construction practices would be used for the transmission line construction, including use of existing rights-of-way, to the extent practicable, and environmental management, including such

⁴¹ *See generally*, Table 5.10-1 (Sheets 1, 3 and 4 of 17) at 5.10-2, 5.10-4 and 5.10-5; Table 10.1.1 (Sheet 1 of 6) at 10.1-4 (“Use environmental best management practices for clearing and construction to minimize impacts. Use equipment that minimizes environmental impacts such as erosion-control devices, matting, and wide-track vehicles when crossing wetlands. Conduct restoration activities where necessary after construction. Offset the potential loss of any disturbed wetlands with regional mitigation opportunities”).

things as erosion-control devices, matting to reduce compaction caused by equipment, use of wide-track vehicles when crossing wetlands, and restoration activities after construction.” ER at 4.1-7; *see also* ER at 4.2-15. Acknowledging that the transmission corridors would cross and could adversely impact wetlands, the ER explains that other standard practices that would be undertaken for the purpose of mitigation are the use of silt fences, mulching, avoiding wetlands to the extent practical, slope texturing, vegetative buffer strips, and the reseeded of areas of disturbed soils. ER at 4.3-5 & 4.3-12.⁴²

For transmission line work that would cross over wetland areas and would require vehicular traffic, the ER specifies that additional mitigation techniques would be employed, such as the removal of excavated soils, re-contouring the affected area, restoring the corridor segment to preconstruction conditions and, where necessary, re-establishing the vegetative cover. *See* ER at 4.2-12; & 4.2-15. In addition, concerning maintenance of the transmission lines during operation, “FPL’s right-of-way maintenance program is customized for each habitat type within the transmission line right-of-way to minimize impacts to living resources. The exact manner in which maintenance would be performed would depend on location, type of terrain, and the surrounding environment.” ER at 5.6-5. Environmental best management practices would be used to reduce soil erosion and sedimentation and vegetation management would comply with applicable

⁴² *See also* Table 4.6-1 (Sheet 1 of 9) at 4.6-3 (“Restrictive land-clearing processes, in forested wetland areas for right-of-way clearing and preparation would be used. Turbidity screens and erosion control devices in areas of wetlands and water resources for access road/structure pad construction would be used. Existing access roads for ingress and egress to rights-of-way would be used where available. Standard industry construction practices would be used for the transmission line construction, including use of existing right-of-way, to the extent practicable, and environmental management, including such things as erosion control devices, matting to reduce compaction caused by equipment, use of wide-track vehicles when crossing wetlands, and restoration activities after construction”).

State requirements. *See* ER at 5.1-3.

For the third mitigation option, the ER explains that the Everglades Mitigation Bank would be available from which to purchase wetland mitigation credits. As it describes, the “Everglades Mitigation Bank (EMB) contains approximately 13,000 acres of relatively undisturbed freshwater and estuarine wetlands west and south of the industrial wastewater facility. This land is also owned and managed by FPL and it operates as a commercial mitigation bank with wetland habitat credits that can be purchased to offset regional wetland impacts. The EMB contains the following vegetative habitats: sawgrass marsh, wet prairie, hypersaline mangrove, tidal mangrove, coastal band mangrove, and coastal ridge mangrove. . . . The EMB is home to 14 species of amphibians, 39 species of reptiles, 14 species of terrestrial mammals, and approximately 150 species of birds.” ER at 2.4-13; *see also* ER at 2.4-22 (“FPL manages the EMB to maintain functioning wetland habitat that may be purchased as mitigation credits to offset wetland impacts within the bank’s service area”); ER at 4.7-2. Petitioners’ claim that the ER provides only “cursory references to mitigation plans” (Petition at 43) is simply not true.

Petitioners have not contested any of these specific measures proposed in the ER to mitigate impacts to wetlands from the construction and operation of the transmission line corridors and associated access roads. Indeed, Petitioners fail to even acknowledge that the Application discusses the potential mitigation measures to the above-described level of detail. Because Petitioners have not identified this discussion in the ER and explained why they disagree with it, they have failed to demonstrate a genuine dispute with the application on a material issue. *See Millstone*, CLI-01-24, 54 NRC at 358.

(ii) The ER Adequately Considers Alternatives to the Proposed Transmission Line Corridors

The second of Contention NEPA 5's allegations, that the "ER fails to adequately discuss alternative locations for the transmission line corridors and access roads as a means to avoid or minimize impacts to wetlands" (Petition at 43), also fails to show a genuine dispute with the Application because the ER contains a more than adequate discussion of alternatives to the proposed transmission line corridors. Petitioners acknowledge that the ER describes the PPSA process for selecting transmission line routes, but contend that "FPL's decision to consider only two corridors...undermines NEPA and NRC regulations." Petition at 45. Petitioners further allege that "NEPA requires a discussion and analysis of *all* alternatives, even those an applicant believes are outside its capability of implementing." *Id.* at 46 (emphasis in original). Such bald claims are not accompanied by the identification of any alternatives that should have been included in the ER discussions, and as such are devoid of substance and do not challenge the Application.

NEPA requires that the NRC evaluate reasonable alternatives to the proposed action. *See, e.g.*, 40 C.F.R. § 1502.14 (2010). The NRC has determined that alternative transmission corridor routes should be considered during its NEPA review. *See* NUREG-1555, Section 9.4.3; *Kansas Gas and Electric Co.* (Wolf Creek Nuclear Generating Station, Unit No. 1), CLI-77-1, 5 NRC 1 (1977). However, contrary to Petitioners' broad and unsupported allegations,⁴³ NEPA is subject to a rule of reason, under which an agency only need to consider reasonable or feasible alternatives to the proposed action (rather than *all* conceivable alternatives no matter how impractical). *See, e.g., LES*, CLI-

⁴³ *See* Petition at 46 ("NEPA requires a discussion and analysis of *all* alternatives").

98-3, 47 NRC at 97; *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 195 & 198 (D.C. Cir. 1991). Accordingly, far-fetched, speculative or impractical alternatives need not be considered in a NEPA analysis. See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-30, 58 NRC 454, 479 (2003) (“The rule of reason guides both the choice of alternatives as well as the extent to which the (EIS) must discuss each alternative...hence, NEPA does not require the consideration of alternatives that are impractical; that present unique problems; or that cause extraordinary costs. Nor does NEPA require the consideration of speculative alternatives which could only be implemented after significant changes in governmental policy or legislation. NEPA also does not require the consideration of alternatives that are not significantly distinguishable from alternatives actually considered”) (citations and quotations omitted); *Vermont Yankee*, 435 U.S. at 551.

FPL has fulfilled its responsibility to consider reasonable alternatives to the proposed transmission line corridors and has provided a discussion in the ER to explain its proposed course of action, contrary to the allegations in Contention NEPA 5. As described below, the transmission corridor selection process used by FPL evaluated a substantial number of alternative route segments. There is, however, no requirement that an alternatives analysis must consider a specific number of route alternatives; nor have Petitioners identified the minimum number of routes that they contend must be considered to render the alternatives analysis adequate. Indeed, the NRC has held that evaluation of a few transmission line routing alternatives is sufficient to support the agency’s performance of its NEPA review. See *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 82-90 (1977); see also *Mt.*

Lookout-Mt. Nebo Prop. Prot. Ass'n v. FERC, 143 F.3d 165 (4th Cir. 1998) (holding that FERC's consideration in an Environmental Assessment of three alternative routes was sufficient to meet the agency's NEPA obligations to consider reasonable transmission line route alternatives). Petitioners here have not alleged the existence of *any* alternative (reasonable or not) which was not considered by FPL, and whose environmental impacts should have been evaluated. Nor have they raised any particular dispute with the transmission line corridor selection methodology described in the ER. Accordingly, they have failed to show a genuine dispute with the Application.

As the ER explains, “[a]pproval of the proposed transmission line corridors is under the authority of the Florida Power Plant Siting Act,” which requires, among other things, minimization of impacts to the environment. ER at 3.7-3. FPL performed a detailed route study and corridor selection process for the new units under the requirements of this act. The “study area was defined, candidate routes were delineated, and routes evaluated using both qualitative and quantitative criteria. . . .The end result of the selection process was the identification of a preferred corridor to submit for licensing approval for each transmission line.” ER at 3.7-3. The ER further provides a description of the methodology and criteria used during the corridor selection process and the results of the analyses. *See* ER Section 9.4.3. For example, the ER notes that the “corridor selection process was based primarily on the geographic location of the starting and ending substations” and “[s]ince much of the west study area is dominated by low-density residential development, agricultural and nursery operations, conservation lands, mining activities, and relatively few existing linear features (roads, other transmission lines) with which to collocate, there were immediately only a few obvious choices for

routes.” ER at 9.4-27. Petitioners raise no objections to the methodology used by FPL in its site evaluation process or to the results of the evaluation.

After determining that there were limited choices for the routes, FPL first evaluated the study areas in a regional screening mapping exercise and “developed alternative routes that attempted to best avoid or minimize certain constraints and take advantage of certain opportunities.” ER at 9.4-28. Figures 9.4-11 and 9.4-12 depict the alternative routes studied. Next, FPL identified several alternative route segments using predetermined route selection guidelines; this effort produced 99 and 134 potential alternative route alignments between the Clear Sky substation and the pre-existing substations to which it would connect. Then, FPL developed alternative route segments that could connect those substations when combined. *Id.*

The objective of the alternative route evaluation was to evaluate the route options and select preferred East and West corridors. FPL’s first step in performing this task was to complete a “systematic, quantitative evaluation of each route alternative using environmental, land use, cost and engineering criteria.” *Id.* One of these criteria used to evaluate the alternative routes was the length of wetlands crossed. Table 9.4-7 at 9.4-46.⁴⁴ Other “siting criteria included land use considerations to minimize potential disruption to such areas as national, state, and county parks; wildlife refuges; estuarine sanctuaries; landmarks; and historical sites. Also, the route selection process minimizes land use impacts by seeking opportunities to collocate with existing linear facilities (*e.g.*,

⁴⁴ See also Table 9.4-5 at 9.4-44 (indicating that wetlands were a resource mapped in the process of evaluating alternative corridor routes).

farm roads, canals, railroads, FPL transmission lines, other transportation rights-of-way, etc.).” ER 4.1-4.⁴⁵

The alternative routes were ranked based on their scores for the criteria, and the “transmission line siting team then began evaluation of the alternatives with a qualitative assessment of more site-specific conditions,” including the ability to avoid or minimize wetland impacts.⁴⁶ ER at 9.4-29; *see also* Table 9.4-8 at 9.4-47 to 9.4-48. After these evaluations, which included numerous meetings and extensive feedback from interested parties, “the West Preferred, West Secondary and East Preferred routes were selected.” ER at 9.4-29. The details of these proposed transmission line corridors are set forth in ER Section 9.4.3.2.

By including this detailed information regarding the transmission corridor selection procedure, the Application demonstrates that the process for siting thoroughly considers environmental impacts, including impacts to wetlands and alternatives for mitigating them. This information fulfills FPL’s duty by enabling the NRC reviewer to “evaluate the applicant’s process for identifying and selecting alternative transmission system routes to ensure that reasonable alternatives to the proposed routes have been considered.” NUREG 1555 at 9.4.3-10. While it is true that the NRC cannot “abdicate its responsibilities under NEPA ‘to other agency certifications’” (Petition at 42), there is nothing which prevents the NRC from giving significant weight to the determination of the Florida siting process, which thoroughly considers the environmental impacts

⁴⁵ *See also* ER at 4.1-5 (“Where practicable, new transmission lines would be routed in existing corridors owned by FPL and routed adjacent to existing transmission lines or other existing linear facilities (e.g., access roads, transportation routes) to minimize impacts.”).

⁴⁶ In addition, ecological surveys were performed along the proposed corridors, as part of the transmission corridor selection process, and the results of such surveys are described in Section 2.4 of the ER. ER at 3.7-3.

associated with transmission corridor siting, in its NEPA review. Indeed, the NRC has consistently held that the “fact that a competent and responsible state authority has approved the environmental acceptability of a site or a project after extensive and thorough environmentally sensitive hearings is properly entitled to ‘substantial weight’ in the conduct of our own NEPA analysis. Such limited reliance is clearly acceptable under NEPA.” *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 527 (1977) (citations omitted). *Accord, Public Service Co. of Oklahoma* (Black Fox Station, Units 1 and 2), LBP-78-28, 8 NRC 281, 282 (1978).

In short, Petitioners’ bald claim that FPL should have done more (in terms of evaluating other, unspecified routing alternatives) does not raise a cognizable dispute with the Application. Mere allegations that an application is inadequate do not give rise to a genuine dispute unless the allegations are supported by facts and a reasoned statement of why the application is unacceptable in some material respect. *Turkey Point*, LBP-90-16, 31 NRC at 521 & n.12.

For the reasons set forth above, Contention NEPA 5 is inadmissible because it fails to demonstrate a genuine dispute with the Application, as required by 10 C.F.R. § 2.309(f)(1)(vi).

16. Contention NEPA 6 - Cumulative impacts on salinity levels of constructing and operating Turkey Point Units 6 & 7

The ER fails to adequately address the cumulative impacts of constructing and operating Turkey Point Units 6 & 7 on salinity levels in groundwater, surface water, Biscayne Aquifer, and Biscayne Bay; wetlands; and wildlife

FPL Response

Contention NEPA 6 is another contention of omission. In it, Petitioners raise the same salinity concerns that they raised in Contention NEPA 1 and assert that FPL's ER failed to address several cumulative impacts that may lead to changes in the salinity of the water near the Turkey Point plant property. Specifically, Petitioners argue that the ER: (1) fails to address the existing plume of saltwater found underneath the plant; (2) fails to address annual agricultural draw-downs of the groundwater in Southern Miami-Dade County; and (3) fails to discuss potential impacts to crocodiles and crocodile hatchlings from increased salinity. Petition at 47-51. These omissions, according to Petitioner, render the ER inadequate. Contention NEPA 6 is inadmissible because it fails to show that a genuine dispute exists with the Application on a material issue of law or fact, since the allegedly missing information is in fact contained in the ER. Further, Contention NEPA 6 fails to provide any support for several of its claims. 10 C.F.R. § 2.309(f)(1)(v).

(i) Contention NEPA 6 Fails To Show A Genuine Issue Of Material Dispute With The Application

For any contention of omission, when a petitioner claims that a license application and supporting documentation fail to address a relevant or necessary issue, the petitioner is "to explain why the application is deficient." Final Rule, 54 Fed. Reg. at 33,170; *Palo Verde*, CLI-91-12, 34 NRC at 156. An allegation that some aspect of a license application is inadequate does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is deficient in some material respect. *Turkey Point*, LBP-90-16, 31 NRC at 521 & n.12.

Tellingly, the only citation to the ER in Contention NEPA 6 is to its discussion of the current population of crocodiles in and around the cooling canals. *See* Petition at 51 (citing ER at 2.4-8 – 2.4-10). Though this is a cumulative impacts contention, Petitioners completely ignore the entire section of the ER (Section 5.11) that is devoted to the assessment of cumulative impacts. In section 5.11, the ER explains that, for its cumulative impacts analysis:

the impacts of operation of the new units were based on existing environmental conditions, so the operations impact analyses have already accounted for present actions when the existing state of the resource is used as a comparison for impacts. For example, impacts analysis for water quality and aquatic ecology resources use existing conditions as the baseline for determining impacts. The baseline accounts for the discharges to surface and groundwater from the past as well as the present since discharges directly influence water quality parameters. The aquatic ecology resources baseline would account for past and present actions that play a role in the vitality of aquatic populations and their habitat's ability to sustain a viable population.

ER at 5.11-1.

Any claim that the ER fails to address cumulative impacts of ongoing activities must include reference to the baseline discussion of existing conditions described in the ER (in addition to reference to the cumulative impacts analysis in Section 5.11). As discussed below, Petitioners fail to address any of the ER's discussion of the impacts they raise in Contention NEPA 6. Accordingly, Contention NEPA 6 is inadmissible because it does not directly controvert positions taken in the Application and does not explain why the Application is supposedly incomplete. 10 C.F.R. § 2.309(f)(1)(vi).

a. Hypersaline Plume

First, Petitioners claim that FPL failed to acknowledge a hypersaline plume

beneath the plant property. Petition at 47. However, as explained in Chapter 5 of the ER, the “Biscayne aquifer beneath the Turkey Point plant property is connected hydrologically to both Biscayne Bay and the cooling canals of the industrial wastewater facility.” ER at 5.2-22. Also, “[t]he water in the industrial wastewater facility is hypersaline with salinity concentrations approximately twice that of Biscayne Bay.” ER at 2.3-11. As a result, “the industrial wastewater facility . . . discharges hypersaline water to the Biscayne aquifer.” ER at 5.2-22. The ER discusses the hypersaline water emanating from the cooling canals into the aquifer and this discussion is incorporated into the baseline conditions in the ER’s cumulative impacts analysis. *See* ER at 5.11-1. Petitioners’ claim that the ER ignores the impact of hypersalinity is without merit.

Petitioners also raise a number of discrete issues, which they speculatively claim (without any citation or support) “could” combine with the effects of constructing and operating Turkey Point Units 6 & 7 and the existing saltwater plume to increase salinity in the area. Petition at 48. According to Petitioners:

This could occur as a result of the cumulative effects of drift from the cooling tower operations, the use of radial wells that could extract freshwater from the Biscayne Aquifer and Biscayne Bay (thereby increasing salinity values in the Bay), the reservation of municipal wastewater that may otherwise be used to supply freshwater into the littoral zone of Biscayne Bay through the CERP BBCW project, the failure of FPL to elevate the entire project area and facilities to guard against the intrusion of saltwater from sea level rise and storm surge (to prevent the cooling canals from becoming essentially part of the Bay), and the use of injection wells that may result in increased salinities in the Floridan Aquifer.

Id.

Each of these potential impacts is addressed in the ER. For instance, salt drift from the cooling towers is discussed in Subsection 5.3.3.2.2 of the ER, which states that, because the water in the cooling canals is an order of magnitude saltier than water that

may be deposited as cooling tower drift, any impacts from salt drift on local terrestrial ecosystems would be SMALL and would not warrant mitigation. ER at 5.3-9. The ER also determines that “[c]onsidering the existing salt-tolerant vegetative community surrounding the plant area, the potential impacts of salt drift to vegetation would be SMALL.” *Id.*

The ER’s discussion of the impact of radial collector wells on the local salinity regime is discussed extensively in FPL’s response to Contention NEPA 1. In short, the ER evaluated the effects on the salinity of the bay and determined that the impact would be small. *Id.* at 5.2-21. The ER also discusses the fact that MDWASD is required under its Water Use Permit to provide 170 mgd of reclaimed water for reuse projects, including 89.1 mgd for the CERP BBCW project. *Id.* at 5.2-16.

As Petitioners acknowledge in Contention NEPA 7, Turkey Point Units 6 & 7 “would be constructed on an elevated pad.” *See* Petition at 52. However, in Contention NEPA 6, Petitioners argue that FPL should “elevate the entire project area and facilities to guard against the intrusion of saltwater for sea level rise and storm surge.” *Id.* at 48. As is explained in FPL’s response to Contention NEPA 7, the purpose of placing the facility “on an elevated pad” is precisely to protect against storm surge, the very issue Petitioners argue FPL ignored. *See* FSAR Section 2.4.5.

Petitioners also claim that deep well injection of liquid effluent into the Floridan Aquifer may result in increased salinities. Petition at 48. But Petitioners fail to explain how pumping effluent into the Boulder Zone of the Lower Floridan aquifer, which already contains salt water, will have any environmental impact. *See* ER at 2.3-19; *see also* ER at 5.3-4 (“There is no reasonably foreseeable pathway by which groundwater in

the Boulder Zone could reach surficial aquifers or surface waters.”) Contention NEPA 6 fails to demonstrate a genuine dispute with the Application regarding hypersalinity. 10 C.F.R. § 2.309(f)(1)(vi).

b. Fall Agricultural Draw Downs

Petitioners refer to “fall agricultural draw downs” conducted every year by water managers from the SFWMD. Petition at 49. According to Petitioners, these draw downs are conducted in order to manipulate groundwater storage in Southern Miami-Dade County at the end of the wet season to support agricultural interests. *Id.* The SFWMD releases large volumes of water each fall from two canals and into Biscayne Bay. *Id.* Petitioners argue that this rapid drainage of freshwater prevents the more natural state where large volumes of water would gradually leak and provide freshwater flows into Biscayne Bay and low-lying coastal wetlands well into the dry season. *Id.* This process brings about an artificially early start to a dry season that becomes unnaturally dry, with high salinities. *Id.* at 50. This, according to Petitioners, has detrimental impacts for the estuarine habitat and increases the risk of saltwater intrusion into the Biscayne Aquifer. *Id.* Petitioners argue that the ER fails to discuss these impacts, which will cumulatively impact local salinity levels. *Id.*

However, the long history of environmental impacts caused by management of the Everglades is explicitly discussed in the ER:

Since the late nineteenth century, the south Florida watershed subregion has been affected by anthropogenic alterations. Land reclamation for agriculture, construction of flood control levees and drainage canals, and urbanization has irreversibly modified the hydrology of the region. One of the major impacts of the hydrologic modification is the reduction of freshwater flow to the

Everglades, which resulted in a degradation of the south Florida ecosystem.

Canals were first dug through the Everglades to drain water from the area south of Lake Okeechobee, thus enabling agriculture to develop during the late nineteenth century.

* * *

The consequences of the Everglades watershed alterations were the destruction of plants and wildlife, soil subsidence, *saltwater intrusion* and fires in the peat layers during periods of drought.

To counter the deteriorating environmental conditions, the U.S. Congress authorized the Central and Southern Florida Flood Control Project (C&SF project) in 1948 with a mandate to provide flood protection, water supply, prevention of saltwater intrusion, and protection of fish and wildlife resources. The state of Florida formed the Central and Southern Florida Flood Control District in 1949, which later became the South Florida Water Management District (SFWMD), to work with the C&SF project. The C&SF project adopted a water-management plan for Lake Okeechobee and three water conservation areas (WCAs) to provide flood protection and water supply through a complex series of canals, levees, pumps, and control structures. An area of approximately 800,000 acres was identified in the northern Everglades, on the basis of soil thickness and geologic formations, as potential agricultural land and referred to as the Everglades Agricultural Area (EAA), which was subsequently drained and farmed. The WCAs, which are approximately 900,000 acres of land enclosed by levees and canals, were constructed in the central Everglades. The locations of the EAA and the WCAs are shown on Figure 2.3-7.

The construction of the flood control canals, levees, and structures by the C&SF project causes a large portion of runoff that originally flowed from the Kissimmee River and Lake Okeechobee into the Everglades to be diverted directly to the Gulf of Mexico by the Caloosahatchee Canal and to the Atlantic Ocean by the St. Lucie Canal. The remaining outflow from the lake discharges to the canals that pass through the EAA.

* * *

Surface water flows from the EAA into the WCAs are maintained by pumping, resulting in alterations in the

timing and spatial distribution of flows, as well as a reduction in the volume of water discharged. As a result, *water levels in the Everglades at present are generally shallower and have shorter hydroperiods* than water levels prior to late nineteenth century development. By 1930, the network of mostly uncontrolled canals drained large quantities of freshwater from the Everglades into the Atlantic Ocean, lowering the water levels in the Everglades as much as 6 feet compared to the predevelopment period. In the southern part of the Everglades, levees impede water flows and cause ponding, which became evident during the mid-1960s in WCA-3 with extensive flooding of tree islands. During periods of drought, water is released from Lake Okeechobee to the EAA and the WCAs. Most of the flows, however, never reach the interior marshes as the flows are confined to canals and nearby marshes.

* * *

By 2000, approximately 50 percent of the historic Everglades basin in Florida remained undeveloped. The rest of the area has been altered for agriculture or urban growth.

ER at 2.3-3 – 2.3-5 (citations omitted, emphases added).

Further, the FSAR discusses local groundwater pumping for agricultural purposes and notes that it takes place during the dry season, which amplifies its effects.

Natural discharge of groundwater in the Biscayne aquifer is by seepage into treams, canals, or the ocean, by evaporation, and by transpiration by plants. *Induced discharge is through wells pumped for municipal, industrial, domestic, and agricultural supplies.* Evapotranspiration, transpiration, and groundwater discharge are greatest during the wet season when water levels, temperature, and plant growth rates are high. Pumpage of groundwater constitutes a part of the total discharge from the aquifer. *The effect of pumpage is amplified because it is greatest during the dry season when recharge and aquifer storage are least.* Most of the water that circulates in the surficial aquifer system is discharged by canals. There is very little direct run-off of precipitation; however, regional discharge of the surficial aquifer into drainage canals and directly into Biscayne Bay is estimated to be approximately 15 to 25 inches per year. It is estimated that 20 inches of the approximately 60 inches of annual

rainfall in Miami-Dade County are lost directly by evaporation, approximately 20 inches are lost by evapotranspiration after infiltration, 16 to 18 inches are discharged by canals and by coastal seepage, and the remainder are used by humans. Nearly 50 percent of the rainfall that infiltrates the Biscayne aquifer is discharged to the ocean, a reflection of the high degree of connection between the aquifer and the canals.

FSAR at 2.4.12-11 (citations omitted, emphasis added). The ER also acknowledges that local pumping lowers the groundwater levels, which, together with the high permeability of the Biscayne aquifer, has led to saltwater intrusion that affects the entire coastal zone. ER at 2.3-17.

Therefore, the ER includes a discussion of the impacts of the historical pattern of draining wetlands around the plant property for agricultural purposes and the FSAR identifies the practice of pumping groundwater during the dry season, when its impacts on water quality are highest. Contrary to Petitioners' allegations, these existing environmental conditions are incorporated into the baseline for the ER's cumulative impacts analysis. *See* ER at 5.11-1. Contention NEPA 6 fails to demonstrate a genuine dispute with the Application regarding "fall agricultural drawdowns." 10 C.F.R. § 2.309(f)(1)(vi).

c. Crocodiles

Finally, Petitioners note that the federally listed American Crocodile is known to breed in and around the cooling canals of the industrial wastewater facility at Turkey Point. Petition at 51. Petitioners note that the hypersaline conditions in the cooling canals may adversely affect crocodile hatchlings, which may need to be relocated in order to increase their chance of survival. *Id.* Nevertheless, according to Petitioners, "the ER

fails to discuss these potential impacts nor does it provide a plan to mitigate these impacts.” *Id.* at 51-52.

Petitioners’ allegation that the ER failed to address the impacts to crocodiles and crocodile hatchlings from increasingly saline water is simply incorrect. Petitioners completely ignore the ER’s discussion of the impacts of Turkey Point Units 6 & 7 on the crocodile population and assert, without citation, that the ER fails to discuss those impacts. *See id.* at 51. However, referring to crocodiles, the ER states:

Their recovery was linked to the conservation efforts at Turkey Point. Construction of the industrial wastewater facility eliminated several thousand acres of relatively natural potential habitat (tidal mangrove) for this species in the 1970s. However, crocodiles discovered and colonized the industrial wastewater facility, which now hosts approximately one-third to one-half of the breeding population of crocodiles in the United States. From 2005 to 2008, FPL biologists have reported 21 to 26 crocodile nests in the industrial wastewater facility, making it the second largest breeding aggregation in the state of Florida.

* * *

FPL has also established a crocodile monitoring program to document breeding success and survival within the industrial wastewater facility. This monitoring includes hatchling studies involving weighing, measuring, and permanently marking (clipping scutes and embedding microchips with unique identification numbers) individual hatchlings.

ER at 2.4-9.

The ER acknowledges the risks to hatchlings from the hypersaline water in the cooling canals of the industrial wastewater facility:

Hatchlings and juvenile crocodiles have underdeveloped osmoregulatory capabilities and need fresh to brackish water at least once per week to maintain normal growth rates. FPL’s crocodile program collects hatchling crocodiles and transfers them to freshwater sanctuaries constructed by FPL, many on the tops of the cooling canal

berms. Growth rates of Turkey Point crocodile hatchlings are equal to or greater than those from reference populations. Given FPL's ongoing management activities that include providing freshwater habitats for young crocodiles, salt deposits from operation of the Units 6 & 7 cooling towers into the industrial wastewater facility would not impact the salinity sufficiently to impact existing crocodile growth and/or survival rates.

ER at 5.3-9.

The ER affirms that this mitigation program would be continued. The cumulative impacts analysis states that “[i]mpacts on the American crocodile in the industrial wastewater facility would be mitigated through the existing management/conservation plan that implements measures to protect hatchlings that are more vulnerable to the salinity level.” *Id.* at 5.11-5; *see also* ER at 10.1-11. Accordingly, Petitioners’ claim that the ER fails to propose a plan to mitigate these impacts is mistaken.

The impact of hypersaline water on crocodile reproduction, specifically on the survival of hatchlings, and FPL’s mitigation program that protects hatchlings and promotes the sustainability of the population are baseline environmental conditions that are incorporated into the ER’s cumulative impact analysis. *See* ER at 5.11-5. By ignoring FPL’s extensive discussion of the impacts of salinity on crocodile hatchlings, Petitioners fail to demonstrate the existence of a genuine dispute with the application. 10 C.F.R. § 2.309(f)(1)(vi).

Following the discussion of crocodile impacts, Petitioners claim that “[a]dditional wildlife impacts need to be discussed and analyzed,” including “the cumulative impacts to the Bay’s flora and fauna, sea grasses (which are sensitive to high salinities), and other marine life.” Petition at 52. Petitioners fail to reference or dispute the ER’s extensive discussion of these aquatic resources. *See, e.g.*, ER at 2.4-2 (identifying seagrass beds

found throughout Biscayne Bay); *id.* at 2.4-16 (the portion of Biscayne Bay near Turkey Point supports seagrasses, sponges, and coral reefs).

The ER also explains that:

The lush seagrass beds [in Biscayne Bay and Card Sound] provide food and refuge for approximately 70 percent of the area’s recreationally and commercially important marine species. Seagrass beds are also a food resource for sea turtles and the Florida manatee. Important seagrass species are shoal grass, turtle grass, and manatee grass.

ER at 2.4-19. The ER further explains that the existing vegetative community in the area is salt tolerant. ER at 5.3-9. Petitioners fail to identify or dispute any of this discussion.

(ii) Contention NEPA 6 fails to provide the factual support required by 10 C.F.R. § 2.309(f)(1)(v)

Petitioners argue that the hypersaline plume has “the potential” to expand and continue its migration with the construction and operation of Turkey Point Units 6 & 7. Petition at 47-48. Petitioners provide no support for this assertion of “potential” expansion. *Id.* According to Petitioners, this expansion and increased salinity in the area “could” be influenced by the cumulative effects of drift from the cooling towers, operation of the radial collector wells, the use of reclaimed water that could be used by CERP projects to restore natural groundwater flow, the failure of FPL to elevate the entire project area to guard against the intrusion of saltwater from sea level rise, and the use of injection wells that may result in increased salinities in the Floridan aquifer. Petition at 48. Petitioners offer no facts or expert opinion—no support whatsoever—for their speculative claim that these impacts “could” influence the migration of saltwater in the aquifer.

Petitioners imply that the water designated for use by Turkey Point Units 6 & 7

would otherwise be available for the BBCW project. *Id.* However, Petitioners fail to state whether MDWASD would even be permitted to supply water to FPL under circumstances where it did not have sufficient reclaimed water to comply with its permit condition to provide 89.1 mgd to the CERP BBCW project. *See* ER at 5.2-16 (explaining that the reuse projects listed in Petition Exhibit 30 of the MDWASD’s water use permit are required permit conditions, while the MDWASD is only required to “work with” FPL to provide reclaimed water for Turkey Point Units 6 & 7). Petitioners do not allege that the BBCW project needs more water, that it would have the capability to utilize additional reclaimed water if more were made available, or that MDWASD or SFWMD would decide to allot water currently designated for Turkey Point Units 6 & 7 to the BBCW project if the water was not needed for Turkey Point Units 6 & 7.

Petitioners also argue that FPL should “elevate the entire project area and facilities to guard against the intrusion of saltwater for sea level rise and storm surge.” *Id.* at 48. Petitioners appear to consider the cooling canals to be part of the “project area” that needs to be elevated. *See id.* However, Petitioners fail to reference any information about the existing elevation of the berms surrounding the cooling canals of the industrial wastewater facility. Such information would be necessary in order to evaluate their assertion that FPL’s ER must discuss the impact of its failure to elevate the cooling canals. Petitioners provide no facts and offer no expert to opine on the amount of sea level rise that would be necessary to affect the cooling canals. Instead, they simply speculate that potential sea level rise could make the cooling canals part of the Bay. *Id.*

Petitioners identify an additional cumulative impact, alleging that “increased mining operations in the area could also accelerate the mixing of surface water and salt-

intruded aquifers.” Petition at 50. Petitioners do not claim that there have been increased mining operations in the area. In fact, the only cited reference for this claim is a SFWMD PowerPoint presentation, which, under the heading “Other Emerging Issues,” states: “increased mining activity that could accelerate mixing of surface water and salt-intruded aquifers.” Petition Exhibit 25 (MDC Canal Agricultural Drawdown Study (February 12, 2008) at 9. The cited bullet point does not identify where the mining is (or would be) located, whether the increase has already happened or is projected or potential in the future, or what “mixing of surface water” entails. In fact, the above sentence is the first and only reference in the Petition to mixing of surface waters and Petitioners fail to explain how the mixing concept relates to their previously identified concerns about the fall agricultural draw downs that lead to dry seasons with high salinities. Petitioners’ citation to one vague bullet point in a PowerPoint presentation is not sufficient support for an admissible contention. 10 C.F.R. § 2.309(f)(1)(v).

Finally, in Contention NEPA 6, Petitioners argue that “[a]dditional wildlife impacts” need to be discussed, specifically “the cumulative impacts to the Bay’s flora and fauna, sea grasses (which are sensitive to high salinities), and other marine life.” Petition at 52. Other than claiming that seagrasses are “sensitive,” Petitioners fail to provide any alleged fact or expert opinion that would support the claims that salinity impacts to seagrasses and other marine life require consideration in the ER. Moreover, Contention NEPA 6 fails to even provide support for this specific claim regarding seagrasses.⁴⁷

⁴⁷ As discussed above, the ER identifies the susceptibility of crocodiles to highly saline water and so the claims in Contention NEPA 6 do not demonstrate a genuine dispute with the Application. However, it should be noted that Petition Exhibit 26 fails to provide sufficient support for the claim that salinity affects crocodiles. As Petitioners concede, it is simply a modeling effort that “seeks to test for salinity effects on hatchlings” and “expects to find impacts from salinity.” See Petition at 51 (citing Michael S. Gaines, Footnote continued on next page

Therefore, Petitioners provide no factual support for the allegations in Contention NEPA 6.

17. Contention NEPA 7 - Impacts of sea level rise

The ER fails to address the direct, indirect, and cumulative impacts of sea level rise on the construction and operation of Turkey Point Units 6 & 7 and the ancillary facilities.

FPL Response

Contention NEPA 7, which alleges that FPL’s ER fails to account for the potential for sea level rise due to climate change, is inadmissible. Petitioners claim that “the ER entirely fails to discuss and analyze the potential impacts of this 1.5 to 5 foot rise in sea level on Units 6 & 7.” Petition at 52. Contention NEPA 7 goes on to claim that:

While it appears that the new units would be constructed on an elevated pad between 19.0-25.5 NAVD 88 (ER 3.9-9; 3.9-16), there is no indication in the ER that the transmission line facilities, reclaimed water pipelines, industrial wastewater facilities, access roads, and other associated facilities would be located any higher than the current elevation of the plant. *See e.g.* ER 3.9-15-16. Indeed, when the ER does discuss elevations of associated facilities, it notes that many – including the containment building, auxiliary building, and turbine building – will be located below plant grade. ER 3.9-13-15. The ER fails to contain discussion regarding the impacts of sea level rise on these facilities, which in turn could impact the operation of Units 6 & 7.

Id. at 52-53.

Contention NEPA 7 is inadmissible because it fails to provide adequate support, fails to demonstrate that the issue is material, and fails to demonstrate a genuine dispute with the Application on a material issue of fact or law. 10 C.F.R. §§ 2.309(f)(1)(iv), (v) and (vi).

Computer Simulation Modeling of Intermediate Trophic Levels for Across Trophic Level Systems Simulation of the Everglades/Big Cypress Region, Abstract (USGS 2000).

(i) Contention NEPA 7 Fails to Raise a Genuine Dispute with the Application Because FPL Accounted for Potential Sea Level Rise in Establishing the Design Basis Flood Elevation for Turkey Point Units 6 & 7

Petitioners acknowledge that FPL increased the design elevation of Turkey Point Units 6 & 7 to protect against sea level rise. *See* Petition at 52. However, they claim that, “with an increase in sea level rise, Units 6 & 7 are likely to be more susceptible to storm surge.” *Id.* at 53. This claim fails to account for the extensive discussion of protection against storm surge in the FSAR.

In Section 2.4 of its FSAR, FPL addressed the probable maximum flooding as a result of hurricanes, tsunamis, seiches, and other flooding events.⁴⁸ In order to determine the Probable Maximum Storm Surge (PMSS), the antecedent water level must be established. FSAR at 2.4.5-5. Following NRC Regulatory Guide 1.59, FPL used the 10 percent exceedance high spring tide, 2.6 feet NAVD 88, as the antecedent water level.⁴⁹ FSAR at 2.4.5-5. FPL adjusted the antecedent water level to account for expected sea level rise over the design life of the plant.⁵⁰ FSAR at 2.4.5-5. FPL took the long-term trend in sea level rise in the Miami area, 0.78 foot per century, and rounded the value up to a full foot per century. FSAR at 2.4.5-6. FPL added this one-foot sea level rise factor to the 2.6 feet NAVD 88 initial water level condition, generating a 3.6 feet NAVD 88

⁴⁸ Regulatory Guide 1.206 (June 2007), “Combined License Applications for Nuclear Power Plants” (LWR Edition), Section C.I.2.4.5.2 Surge and Seiche Water Levels, states that COL applicants “should provide historical data related to surges and seiches and discuss considerations of hurricanes, frontal (cyclonic) type windstorms, moving squall lines, and surge mechanisms that are possible and applicable to the site.”

⁴⁹ The 10 percent exceedance high spring tide is the high tide level that is equaled or exceeded by 10 percent of the maximum monthly tides over a continuous 21-year period. FSAR at 2.4.5-5.

⁵⁰ It should be noted that future trends of sea level rise may be influenced by several factors, including climate change. However, there is no currently accepted model that is used to accurately predict long-term sea level rise. Therefore, National Oceanic and Atmospheric Administration (“NOAA”) data were extrapolated for future sea level rise.

sea-level-rise adjusted water level.

This adjusted 3.6 feet NAVD 88 water level was used as the initial water level condition in FPL's simulation's using the NOAA's SLOSH model, which is used to forecast hurricane storm surges. FSAR at 2.4.5-6. The SLOSH model produced a PMSS elevation of 21.1 feet NAVD 88. FSAR at 2.4.5-10. Combining this PMSS elevation with the 3.7 feet maximum wave run-up, led FPL to conclude that the maximum water level due to a probable maximum hurricane (adjusted to account for sea level rise) would be 24.8 feet NAVD 88.⁵¹ FSAR at 2.4.5-12. The plant area final elevation design incorporated this analysis. FSAR at 2.4.10-1. The elevations of floor entrances and openings for all power block structures are at 26 feet NAVD 88. FSAR at 2.4.10-1; *see also* FSAR at 2.4.2-4. Because FPL has demonstrated the safety of the proposed facility in its FSAR, a NEPA analysis of the effects of sea level rise on the facility cannot be material to the NRC's licensing findings.

Thus, Contention NEPA 7 fails to demonstrate that its storm surge concern raises a genuine dispute with the Application. 10 C.F.R. § 2.309(f)(1)(vi).

(ii) Contention NEPA 7 Fails to Demonstrate that Potential Sea Level Rise is a Material Issue

Contention NEPA 7 alleges that the ER fails to analyze the potential impacts of sea level rise on Turkey Point Units 6 & 7 or its associated facilities. Petition at 52. But the detailed sea level rise analysis sought by Petitioners is not required by NEPA, NRC

⁵¹ In FSAR Section 2.4.5.2.1 (and Figure 2.4.5-202) FPL addressed historical hurricane events and storm surges in Florida, including a detailed discussion of 1992's Hurricane Andrew, which made landfall at Fender Point, Florida, approximately 8 miles north of the Turkey Point site. FSAR at 2.4.5-3. The FSAR states that the combined storm surge and astronomical tide from Hurricane Andrew in northern Biscayne Bay ranged from 4 to 6 feet, with a maximum surge level of 16.9 feet near the center of Biscayne Bay. FSAR at 2.4.5-4.

regulations or NRC guidance. In fact, Petitioners have provided no basis for contending that such analysis is required by applicable law or regulation. Instead, Petitioners have done little more than claim that sea level rise should be studied in further detail. Such generic exhortations for additional study do not provide a basis for a contention.

NEPA requires federal agencies, as part of their decision-making process, to consider the environmental impacts of actions under their jurisdiction. 42 U.S.C. § 4332(2)(C)(i). The regulations in 10 C.F.R. Part 51 require COL Applicants to discuss the impact of the proposed action *on the environment*. 10 C.F.R. § 51.45(b)(1). Contention NEPA 7 turns this requirement on its head by seeking to require FPL to discuss the impact of the environment on the proposed action (“the ER entirely fails to discuss and analyze the potential impacts of this 1.5 to 5 foot rise in sea level on Units 6 & 7”). Petitioners fail to point to any applicable regulation that calls for such an evaluation. Accordingly, Petitioners have provided no legal basis for contending that such an evaluation is required.

As discussed earlier in the response to Contention NEPA 1.5, the NRC Staff recently published supplemental guidance in which it stated that the NRC would not be addressing the public health impacts of climate change under NEPA. Similarly, a NEPA-driven review of sea-level rise impacts on Turkey Point Units 6 & 7 and their associate facilities is rendered unnecessary by FPL’s FSAR analysis and the NRC’s ongoing oversight authority under the AEA. Because FPL has designed the plant to account for sea level rise and would be subject to a general licensing requirement to maintain the licensing basis for Turkey Point Units 6 & 7, safety impacts of sea level need not be addressed in the ER.

Petitioners' claim that FPL's ER must evaluate the impacts of rising sea level on Turkey Point Units 6 & 7 and its associated facilities is invalid as a matter of law and so fails to raise a material issue. 10 C.F.R. § 2.309(f)(1)(iv).

(iii) Contention NEPA 7 Lacks Factual or Expert Support

Contention NEPA 7 lacks factual support for its assertions. 10 C.F.R. § 2.309(f)(1)(v). Petitioners' only support for this contention is a citation to the SFWMD's First Completeness Review of FPL's SCA (Petition Exhibit 11) ("SFWMD's Comments"). Petition at 52-53. The discussion in the SFWMD's Comments does not purport to be an expert opinion on sea level rise; it simply reports a prediction of one task force. Petition Exhibit 11 at 34.

In addition, the specific claims for which Petitioners rely upon the SFWMD's Comments are not supported in that document. For instance, Petitioners allege (Petition at 53) that "Units 6 & 7 are likely to be more susceptible to storm surge," but the SFWMD's Comments simply ask FPL to identify the calculated probable maximum storm surge, to state whether the design protects against such an event, and whether the associated facilities would be protected. *See* SFWMD Comments at 35. These questions cannot be relied upon as support for this contention.

Further, Petitioners claim that "an increase in sea level is likely to raise the general groundwater levels," but claim that there "is no discussion in the ER of the impacts of this change in groundwater level and the resulting saltwater intrusion." Petition at 53. But the cited SFWMD Comments simply state that "it is not clear how the facility will be protected from saltwater intrusion due to sea level rise of 3-5 feet." SFWMD Comments at 35. Petitioners have not proffered any support for their argument

that a sea level rise analysis must be included in the ER or that any significant impacts have not been disclosed in the ER. Accordingly, this Contention fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(v).

18. Contention NEPA 8 - Failure to address need for power

FPL fails to adequately address the need for power in its ER. In particular, the ER fails to consider the drop in electricity demand in FPL's service area since 2008, and it relies on erroneous claims that state and regional evaluations satisfy NUREG-1555

FPL Response

For this contention's basis, Petitioners assert, without reference or support, that the ER "does not contain the requisite analysis of the power need" that the Commission needs to "make the benefits determination required by its regulations and NEPA." Petition at 53-54.

Petitioners divide the contention's need for power challenge into two separate arguments. The first half of Contention NEPA 8 alleges that the ER fails to consider a drop in electricity demand (Contention NEPA 8.1). The second half of Contention NEPA 8 claims that the ER fails to satisfy NUREG-1555 (Contention NEPA 8.2). As demonstrated below, neither Contention NEPA 8.1 nor Contention NEPA 8.2 satisfies the requirements of 10 C.F.R. §§ 2.309(f)(1)(iv), (v), and (vi). Consequently, Contention NEPA 8 should be rejected in its entirety.

(i) Contention NEPA 8.1 is inadmissible

Contention NEPA 8.1 calls into question FPL's need for power analysis, suggesting that FPL's electricity demand forecast is "critically outdated" because the ER does not reflect the recent economic downturn and the "consequential drop in electricity

demand,” including peak demand forecasts. Petition at 54-56. Petitioners claim that recent “net energy load” forecasts have outstripped actual demand usage, and that “excess capacity, caused by slowing demand, is already pushing the need for Units 6 & 7 further into the future.” *Id.* at 55-56. Petitioners also contend that the ER has failed to consider the effect that greater efficiency can have on demand and ignores higher efficiency goals set by the Florida Public Service Commission (“FPSC”). *Id.* at 56-57. Petitioners also argue that the ER fails to consider pending federal regulations and federal legislation requiring more renewable energy and energy efficiency. *Id.* at 56, 57. Finally, Petitioners claim that FPL has “yet to make a decision on whether to finish construction of Units 6 & 7,” making the proposal speculative. *Id.* at 58.⁵²

As an initial matter, Petitioners’ arguments are immaterial to the finding that the NRC must make in this proceeding. 10 C.F.R. § 2.309(f)(1)(iv). Petitioners merely claim that the need for power forecast is inadequate. However, they fail to make any showing of how this supposed inadequacy has any practical impact on the ER analysis. Thus, the contention should be rejected out of hand.

The NRC’s responsibility to examine need for power arises in the context of NEPA. *Rochester Gas & Electric Co.* (Sterling Power Project, Nuclear Unit No. 1), ALAB-502, 8 NRC 383, 388 (1978), *aff’d* CLI-80-23, 11 NRC 731 (1980). Need for power is “a shorthand expression for the ‘benefit’ side of the cost-benefit balance which NEPA mandates.” *Seabrook*, ALAB-422, 6 NRC at 90. Accordingly, for Petitioners’ challenge of “insufficient data and an outdated energy demand forecast” to be relevant in

⁵² In the final paragraph of Contention NEPA 8.1, Petitioners also claim that the need for power analysis relies on a “state process that is neither comprehensive nor responsive to forecasting changes.” Petition at 58. This assertion is the gravamen of Contention NEPA 8.2. Accordingly, this claim is addressed in FPL’s answer to Contention NEPA 8.2.

this COL proceeding, Petitioners must also make a showing that the outcome of the FPL cost-benefit balance would be different. They have not even attempted to make any such showing. Therefore, their assertion that the data and forecast used in originally demonstrating the need for Turkey Point Units 6 & 7 are insufficient and outdated fails to raise an issue that is material to the finding that the Commission must make. 10 C.F.R. § 2.309(f)(1)(iv); *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 273-74 (2007) (ruling a contention inadmissible for failing to show how including allegedly omitted information “would result in material changes to the ER’s analysis” or “change the conclusions reached in the ER” and thus be material to the decision before the Board).

Petitioners’ arguments also lack the required support and fail to show that a genuine dispute exists on a material issue of law or fact with the Application. 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

FPL’s need for Turkey Point Units 6 & 7 – explained throughout Chapter 8 of the ER and discussed in more detail below – was developed through the comprehensive need determination process that the FPSC requires FPL to undertake. The NRC has traditionally placed heavy reliance on a state’s determinations regarding need assessments, given that states “are charged with the duty of insuring that the utilities within their jurisdiction fulfill the legal obligation to meet customer demands.” *Carolina Power and Light Co.* (Shearon Harris Nuclear Plant, Units 1, 2, 3, 4), ALAB-490, 8 NRC 234, 241 (1978); *see also Sterling*, ALAB-502, 8 NRC at 388. According to the Supreme Court, “[t]here is little doubt that under the Atomic Energy Act of 1954, State public utility commissions or similar bodies are empowered to make the initial decision

regarding the need for power.” *Vermont Yankee*, 435 U.S. at 550 (1978) (citation omitted); *see also Pacific Gas & Elec. Co. v. State Energy Res. Conservation & Dev. Comm’n.*, 461 U.S. 190, 205-208 (1983).

More recently, the NRC has confirmed that, in performing the need analysis required by NEPA, the NRC “does not supplant the States, which have traditionally been responsible for assessing the need for power generating facilities . . . ” and “the NRC has acknowledged the primacy of State regulatory decisions regarding future energy options.” Denial of Petition for Rulemaking, 68 Fed. Reg. 55,905, 55,909 (Sept. 29, 2003).

While a discussion of need and benefit is required in the ER, and subsequently in the NRC’s NEPA analysis, the Commission has clearly explained that it

is *not* looking for burdensome attempts by the applicant to precisely identify future market conditions and energy demand, or to develop detailed analyses of system generating assets, costs of production, capital replacement ratios, and the like in order to establish with certainty that the construction and operation of a nuclear power plant is the most economical alternative for generation of power.

Id. at 55,910 (citation omitted, emphasis added). *See also id.* (“The Commission emphasizes . . . that such an assessment should not involve burdensome attempts to precisely identify future conditions”). Rather, the ER will sufficiently address the need assessment if it “reasonably characterize[s] the costs and benefits associated with the proposed licensing actions.” *Id.* That need assessment should account for significant uncertainty that necessarily accompanies long-range forecasting of need for power. Furthermore, economic recessions should not be given undue weight in such forecasts, because of their transitory nature and the impossibility of predicting them. *See Seabrook*, ALAB-422, 6 NRC at 91-92.

As discussed in the Application, Florida has a comprehensive statutory scheme requiring investor-owned utilities such as FPL to submit detailed plans regarding the utility's load and resource needs. ER at 8.1-1 to 8.1-3. Florida also has in place the PPSA, which requires a utility proposing to construct a new power plant exceeding 75 MWe of steam generating capacity to, among other things, obtain from the FPSC an order approving the utility's need for the additional capacity. ER at 8.1-3 to 8.1-4.

In October 2007, FPL submitted to the FPSC its Petition for Determination of Need for Turkey Point Units 6 & 7. ER at 8.1-4. FPL submitted a detailed Need Study and testimony from 15 witnesses in support of its Petition. *Id.* Several interested parties intervened in the FPSC docket, including the Office of Public Counsel (an independent ratepayer advocate appointed by the Legislature), five utilities, and a private citizen, among others. *Id.* After conducting several days of hearings and upon a full review of an extensive administrative record, the FPSC determined that there was a need for FPL's proposed new nuclear units at Turkey Point and granted FPL's petition by a final order in April 2008 ("FPSC Order").⁵³ *Id.*

The FPSC determined that Turkey Point Units 6 & 7 will provide needed system reliability, fuel diversity, baseload capacity, reasonably affordable electricity, and the most cost effective sources of power. ER at 8.1-4 to 8.1-6. With respect to forecasted demand, the FPSC found that "FPL has a need for 8,350 MW of additional capacity beginning in the 2011 through 2020 period," and that "Turkey Point 6 and 7 will *provide only a portion of FPL's need for capacity.*" ER at 8.1-4 (emphasis added) (quoting the FPSC Order). As for FPL's methods used to determine forecast demand, the

⁵³ The FPSC Order is quoted extensively in the ER (ER at 8.1-3 to 8.1-6) and is available at <http://www.psc.state.fl.us/library/filings/08/02812-08/02812-08.pdf>.

FPSC found that the “forecast assumptions were drawn from independent sources . . . relied upon in prior cases;” “[t]he regression models used to calculate projected peak demands conform to accepted economic and statistical practices;” and the “projected peak demands produced by the models appear to be a reasonable extension of historical trends.” ER at 8.1-6 (quoting the FPSC Order).

The inadequacies Petitioners perceive to exist in the need determination analysis lack support and otherwise fail to show that the ER’s characterization of costs and benefits associated with the proposed licensing action is unreasonable.

In multiple instances, Petitioners have failed to raise a genuine dispute on a material issue of law or fact with the Application. 10 C.F.R. § 2.309(f)(1)(vi). With respect to the claims that the forecast demand is “outdated” or otherwise inaccurate as a result of the recent economic downturn (Petition at 54-56), FPL’s case regarding the need for Turkey Point Units 6 & 7 is supported by numerous studies, long-term forecasts, and models that carefully consider a wide variety of factors, including historical economic and demographic trends. *See, e.g.*, ER §§ 8.1, 8.2. Petitioners nowhere challenge this extensive support, and thus fail to dispute it.

In addition, Petitioners overlook the fact that the FPSC need determination considered the scenario where forecast demand drops off significantly. Indeed, at the direction of the FPSC, an evaluation was performed of the need for Turkey Point 6 & 7 under alternative forecasts that assumed drastically reduced growth in the number of customers, and hence electrical demand, in the period prior to the units’ expected in-service dates. FPSC Order at 6. The FPSC concluded that even under the “most extreme” low-growth scenario, there remained a need for the capacity that Turkey Point 6

& 7 would provide. *Id.* The FPSC found that, “[i]f FPL’s load forecast dramatically declines . . . the most likely result will be the cancellation of some gas-fired combined cycle plants that have not yet been certified.” ER at 8.1-4 to 8.1-5 (quoting FPSC Order), not the elimination of the need for Turkey Point Units 6 & 7. Nowhere do Petitioners challenge this finding, or otherwise suggest it is unreasonable, and therefore fail to dispute it.⁵⁴

Also, and quite significantly, Petitioners ignore the FPSC finding that Turkey Point Units 6 & 7 will be used to satisfy baseload demand (that is, demand for power that is not directly dependent on the magnitude of the system’s peak demand). The FPSC found:

[B]y 2010 FPL will have approximately 15,235 MW of existing or certified base-load generation capacity which consists of coal (902 MW), gas-fired combined cycle (10,979 MW), and nuclear generation facilities (3,354 MW). As mentioned previously, FPL’s peak load is expected to increase by over 6,000 MW by the year 2020. FPL’s base-load needs are also projected to increase by approximately the same amount. Even with the addition of Turkey Point 6 & 7, FPL’s base-load needs will continue to be met primarily with natural gas-fired combined cycle generators.

ER at 8.1-5. Petitioners’ arguments about the potential reduction in peak load from generating capacity ignore, and thus do not contest, the demonstrated need to deploy Turkey Point Units 6 & 7 to satisfy the growth in baseload generation needs.

⁵⁴ Petitioner’s purported expert’s Declaration claims that the Turkey Point Units 6 & 7 will not be viable in the future based in part on natural gas prices. Cooper Decl. at ¶ 7 (citing 2009 testimony at pp. 11-13 and 2010 testimony at p.20). The cited testimony was provided to the FPSC concerning early cost recovery for nuclear reactors, including the Turkey Point units, in 2009 and 2010. Cooper Decl. at ¶3. Nowhere in the cited pages of Dr. Cooper’s 2009 or 2010 testimony does Dr. Cooper challenge the FPSC finding that gas-fired combined cycle plants will be cancelled if FPL’s load forecast dramatically declines.

Also fatally flawed are Petitioners' claims that the ER failed to consider the effect that greater efficiency can have on demand and failed to discuss the new efficiency and DSM goals set by the FPSC. Petition at 56-57. These claims simply are not true. The FPSC specifically found that if "the amount of DSM or renewable generation available substantially increases, the most likely result will be the cancellation of some gas-fired combined cycle plants that have not yet been certified." ER at 8.1-4 to 8.1-5 (quoting the FPSC Order). Furthermore, the FPSC acknowledged FPL's anticipated 1,899 MW of DSM summer peak demand reduction by the year 2020 and found that there are "no additional renewable energy sources or conservation measures which could effectively mitigate FPL's need for Turkey Point 6 and 7." ER at 8.1-6 (quoting the FPSC Order). Although Petitioners claim that FPL's efficiency programs are "weak" and other utilities realize greater energy savings through efficiency programs (Petition at 55-56, citing Petition Exhibit 32), Petitioners nowhere challenge the FPSC's ultimate finding that FPL could not achieve sufficient additional DSM savings over the next ten years to supplant the need for Turkey Point Units 6 & 7. ER at 8.1-5 to 8.1-6. Indeed, the FPSC found that, for example, FPL's load forecast accounted for 1256 MW of load reduction as a result of the new energy efficiency standards mandated by the Energy Policy Act of 2005, and that it is "unrealistic" to assume another 5,130 MW of cost-effective, incremental DSM to meet FPL's demand needs. FPSC Order at 20. Thus, Petitioners' claims with respect to energy efficiency fail to materially dispute the ER. 10 C.F.R. § 2.309(f)(1)(vi).⁵⁵

⁵⁵ Petitioners do not even attempt to make any showing that a discussion of the new FPSC DSM and demand side efficiency goals has any practical impact on the ER's analysis. Thus, this claim is also immaterial to the findings the Board must make. 10 C.F.R. § 2.309(f)(1)(iv).

Petitioners also erroneously argue that the ER fails to consider pending federal regulations and federal legislation requiring more renewable energy and energy efficiency. Petition at 56, 57. Aside from the fact that whether these regulations or legislation will ever take effect is pure conjecture, Petitioners fail to challenge the FPSC finding that “renewable generation available today or in the near future cannot provide enough base-load capacity to avoid the need that would be met by the addition of Turkey Point 6 and 7,” in light of the fact that “Florida has limited capacity for wind power” and “price and availability are impediments” to solar power. FPSC Order at 11. In any event, the FPSC concluded that “an increase in renewable generation would likely result in the deferral of uncertified natural gas units,” ER at 8.1-5 (quoting FPSC Order), not the elimination of the need for Turkey Points 6 & 7. Because the need determination considers the very circumstances Petitioners now claim are missing, insufficient, or outdated, Petitioners have failed to materially dispute the ER here. 10 C.F.R. § 2.309(f)(1)(vi).

Petitioners’ arguments also lack adequate factual support. 10 C.F.R. § 2.309(f)(1)(v). Among other things, Petitioners point to Petition Exhibit 39, Slide 18 (from a presentation prepared by the FPL CEO) for support, claiming it shows a one year decrease in population growth in Florida. Petition at 55. This is true. But that same slide also shows that population growth is projected to resume and continue above the national average into the future for the same reasons that population growth exceeded the national average in the past, projections ignored by Petitioners. This slide actually supports the need for Turkey Point Units 6 & 7. Furthermore, even if one were to assume, as Petitioners’ argument implies, that population growth is the sole driver of the need

determination for a power plant project such as Turkey Point Units 6 & 7, Petitioners neither assert nor make any showing that a one year decrease in population growth followed by expected years of resumed above-average population growth calls into question the cost-benefit balance of the proposed plants. Nor do Petitioners take issue with either the factors in their Exhibit 39 that support the prediction by the University of Florida that Florida's population growth is expected to outpace the national rate as Florida rebounds from the recession, or the drivers of that future growth. Petition Exhibit 39 at 18.

Similarly inapposite is Petitioners' reliance on a chart showing that other utilities achieve greater energy savings through energy efficiency than FPL. Petition at 56 (citing Petition Exhibit 32, Testimony of PSC Staff Expert Witness Spellman at Exhibit RFS-5). Spellman Exhibit RFS-5 ranks all U.S. utilities on energy saved with efficiency programs. Petitioners make no showing, or even assert, that the efficiency savings possible through energy efficiency programs elsewhere in the U.S. have any relevance to those possible in Florida. This chart, therefore, does not support Petitioners' claim that the ER fails to consider the effect that greater energy efficiency can have on demand. 10 C.F.R. § 2.309(f)(1)(v). In any event, of the Florida utilities identified in Exhibit RFS-5, FPL ranks the highest in energy savings with energy efficiency programs. *See* Petition Exhibit 32 at Exhibit RFS-5.

Petitioners erroneously claim that the drop in power demand has caused FPL to push the in-service dates of Turkey Point Units 6 & 7 back, citing the FPL cost recovery petition for calendar year 2011 (Petition Exhibit 31 at 8). Petition at 56. However, nowhere on the cited page or any other document does FPL state that the new in-service

dates resulted from a drop in demand which can no longer support the need for power.

What the cost recovery petition states is that

the revised in-service date for planning purposes is derived by sequencing the Preparation and Construction phase activities, based on currently available information, to begin after the expected receipt of a Combined License from the NRC and completion of other necessary licensing and permitting work.

Petition Exhibit 31 at 8. Again, Petitioners' cited document does not support the claims made in Contention NEPA 8.1 and thus fails to satisfy 10 C.F.R. § 2.309(f)(1)(v).

Petitioners assert that FPL has “yet to make a decision on whether to finish construction of Units 6 & 7,” citing the FPL cost recovery petition (Petition Exhibit 31), and claim that this is an admission by FPL that there may not be a need for the units, “based *presumably in part* on a lack of need for power. . . .” Petition at 58 (emphasis added). Contrary to Petitioners' unsupported and speculative “presumption,” the cost recovery petition nowhere suggests that there might not be a need for the units based on a lack of need for power. Rather, the cost recovery petition states that (1) the “primary focus” of the project thus far has been obtaining the necessary federal, state, and local approvals for construction and operation; (2) factors providing “a clear path to construction” have not yet achieved a high level of predictability; and therefore (3) expenditures beyond those required to obtain the necessary licenses, permits, and approvals would be premature in 2010 and 2011. Petition Exhibit 31 at 8. Consequently, FPL sought recovery for only pre-construction related costs for Turkey Point Units 6 & 7 in 2010 and 2011. Petition Exhibit 31 at 9-10. There is no mention of any lack of need for the units based on a lack of need for power.

Petitioners claim that actual “net energy load” has fallen short of forecasts and, therefore, information provided in the ER “runs in stark contrast to events on the ground,” again calling into question the need for Turkey Point Units 6 & 7. Petition at 55. However, Petitioners’ claims lack factual support. 10 C.F.R. § 2.309(f)(1)(v). Petitioners’ argument ignores the detailed discussion set forth in the Application describing the information on which FPL relies for its resource planning, and therefore fails to support the contention. Although “net energy for load” (“NEL”) forecasts are used in resource planning, determinations of the timing and magnitude of FPL’s resource needs are

accomplished by system reliability analyses that are typically based on a dual planning criteria of *a minimum peak period reserve margin of 20 percent* (FPL applies this to both summer and winter peaks) *and a maximum loss-of-load probability of 0.1 day per year*. Both of these criteria are commonly used throughout the regulated utility industry.

ER at 8.2-1 to 8.2-2 (emphases added). As explained by the FPSC,

The reserve margin criterion examines the peak hour of each year, while the [loss-of-load-probability] value takes into account daily peak hours of the year. If either criterion is exceeded, this situation would indicate that additional generation is needed at that particular time.

FPSC Order at 5. In other words, the ER and FPSC Order explain that the criteria that drive the timing and magnitude of FPL’s resource needs are peak load and loss of load probability, which are not based on NEL. Petitioners’ contention, however, simply points to two NEL numbers and asserts an assumption without providing any factual basis or expert opinion supporting that assumption, let alone attempting to show how the difference between net energy load forecasts and actual net energy load challenges the

need for Turkey Point Units 6 & 7. Thus, with regard to the timing and magnitude of FPL's resource needs, Petitioners' citation to the NEL provides no factual support for its claims.⁵⁶

Aside from Petitioners' failure to provide any support for their erroneous assumption that NEL determines the timing and magnitude of FPL's resource needs, Petitioners' claims about FPL's demand forecast ignore the FPSC's finding that "[i]f FPL's load forecast dramatically declines . . . the most likely result will be the cancellation of some gas-fired combined cycle plants that have not yet been certified," ER at 8.1-4 to 8.1-5 (quoting FPSC Order), not the elimination of the need for Turkey Point Units 6 & 7. Consequently, Petitioners' claims with respect to NEL fail to materially dispute the Application. 10 C.F.R. § 2.309(f)(1)(vi).

In summary, Contention NEPA 8.1 fails to meet the pleading requirements in 10 C.F.R. §§ 2.309(f)(1)(iv), (v), and (vi).

(ii) Contention NEPA 8.2 is inadmissible

In Contention NEPA 8.2, Petitioners argue that the NRC should not rely on the State's need determination because the regulatory processes used by the State do not meet the criteria set forth in the NRC guidance contained in NUREG-1555. Petitioners contend that the NUREG-1555 criteria are not met because the State proceedings for determination of need, the submittal of a ten year site plan, and the establishment of DSM goals are neither "integrated [n]or coordinated". Petition at 59-61; *see also* Cooper

⁵⁶ And it is not necessarily the case that a decrease in forecast NEL must correspond with a forecast decrease in peak demand. Petitioners' own exhibit demonstrates that increasing summer system peak forecasts can correspond with decreasing NEL forecasts. Petition Exhibit 28 at 48 (showing an increase from actual August 2008 total peak demand to forecast August 2009 total peak demand and a decrease from actual August 2008 NEL to forecast August 2009 NEL).

Declaration at ¶ 8. These contentions are both wrong and irrelevant, since the criteria contained in NUREG-1555 do not require the State need determination process to be either “integrated” or “coordinated.”

Petitioners’ arguments fail to raise a dispute on a material issue of law or fact with the Application, thus rendering Contention NEPA 8.2 inadmissible. 10 C.F.R. § 2.309(f)(1)(vi). Although Contention NEPA 8.2 seeks to challenge the Florida regulatory process’s compliance with NUREG-1555, Petitioners nowhere dispute the portions of the ER that specifically demonstrate how NUREG-1555’s four criteria are met. This demonstration is contained in Section 8.3 of the ER, which is not even mentioned by Petitioners. Section 8.3 discusses in detail how the Florida regulatory process for determining need is (1) systematic, (2) comprehensive, (3) subject to confirmation, and (4) responsive to forecasting uncertainty. The failure to identify and challenge the relevant information provided in the application warrants rejection of the contention.

Even if the Licensing Board were to consider Petitioners’ other arguments in Contention NEPA 8.2, none revives the contention because none makes any showing that would call into question FPL’s and the NRC Staff’s reliance on the FPSC need determination under the criteria contained in NUREG-1555. Consequently, Contention NEPA 8.2 must be rejected.

The Commission’s Staff will rely on a state’s need for power analysis if it meets certain criteria contained in NRC Staff Guidance:

Affected States and/or regions may prepare a need for power evaluation as part of a State or regional energy planning exercise. Similarly, State or regional agencies may require the applicant to document a need for power or plan for future plant construction. The [COL] applicant may choose to rely on those documents rather than prepare

a description of the power system on its own. If so, NRC staff should review these documents to determine if they are (1) systematic, (2) comprehensive, (3) subject to confirmation, and (4) responsive to forecasting uncertainty. If NRC staff conclude these other documents are acceptable, no additional independent review by NRC staff may be needed.

NUREG-1555 at 8.1-3. As the ER describes in detail, and as discussed below, Florida's regulatory process for analyzing and evaluating the need for Turkey Point Units 6 & 7 squarely meets the four criteria set forth in the ESRP that must be satisfied to allow the Commission Staff to rely on a state's need for power determination. Indeed, the NRC Staff has recently found the same Florida regulatory process followed by FPL to be systematic, comprehensive, subject to confirmation, and responsive to forecasting uncertainty for another proposed new nuclear power plant to be sited in Florida.⁵⁷

ER Section 8.3.1 describes how the Florida regulatory process for the need for power determination is "systematic." The regulatory process considers the need for power in a utility's service area, the region, and the country as a whole. First, the need for power planning must be reflected in annually updated ten year site plans that Florida utilities submit to the FPSC. ER at 8.3-1. The ten year site plans estimate the utility's power-generating needs and the location of any proposed power plant sites. ER at 8.1-2. The FPSC will make a preliminary study of the plan and classify it as "suitable" or "unsuitable" based on its review of, among other things, the need for electrical power, the plan's effect on fuel diversity in the State, environmental impact of proposed sites, possible alternatives to the proposed plan, and consistency with the state comprehensive plan. *Id.*

⁵⁷ NUREG-1941, Draft Environmental Impact Statement for Combined Licenses (COLs) for Levy Nuclear Plant Units 1 and 2 (Aug. 2010) at 8-4 -- 8-6.

Proposed generating units that are identified in the ten year plan are subjected to a further, unit-specific Determination of Need before the FPSC. ER at 8.3-1. For the Turkey Point Units 6 & 7 need determination, FPL submitted among other things a Need Study for Electrical Power and the testimony of 15 witnesses. *Id.* at 8.1-4. Several parties, including the Florida Office of Public Counsel, who advocates on behalf of utility customers before regulatory agencies, intervened in the proceeding. *Id.* In addition to pre-filed testimony and a full evidentiary hearing in which witnesses were cross-examined about their pre-filed testimony, a public hearing was held for members of the public to provide testimony. *Id.* See generally FPSC Order (describing the participation of the various parties at the public hearing). The FPSC Staff reviewed and independently analyzed the information and testimony provided by FPL and the other participants and concluded that the FPSC should determine that there was a need for the new Turkey Point units. ER at 8.1-4. The FPSC

reviewed FPL's forecast assumptions, regression models, and the projected system peak demands, and [found] that they are appropriate for use in this docket. The forecast assumptions were drawn from independent sources which [the FPSC has] relied upon in prior cases. The regression models used to calculate the peak demands conform to accepted economic and statistical practices. Finally, the projected peak demands produced by the models appear to be a reasonable extension of historical trends.

FPSC Order at 5. The FPSC issued an order granting the determination of need. ER at 8.1-4.

The utility data provided in the ten year site plans have regional and national implications as well. The Florida Reliability Coordinating Council ("FRCC") gathers the data from utilities' individual ten year plans and annually produces a Load and Resource Plan, which is a compilation of operating entities' ten-year site plans and addresses,

among other things, regional firm peak demand, available capacity, and reserve margin. ER at 8.1-7. This information is provided to the FPSC, which holds an annual workshop to conduct an intensive review of the data. *Id.* FRCC also submits this information to the North American Electric Reliability Corporation (“NERC”). ER at 8.1-2, 8.3-1. NERC then submits this information to the Energy Information Administration (“EIA”) as a national composite with region-specific information. *Id.* at 8.3-1.

As the ER summarizes, “[t]he statutory, regulatory, and administrative requirements that make up the Florida and FRCC processes comprise methodical state and regional processes for systematically reviewing the need for power that FPL is responsible for satisfying.” ER at 8.3-1. The “systematic” NRC criterion has been met as described in the ER, and Petitioners do not challenge this aspect of the Florida regulatory process.

ER Section 8.3.2 describes how the Florida regulatory process is “comprehensive.” Among other things, the annual resource planning and need determination processes include demand and energy forecasting for at least a ten year period; utility program for meeting forecast demand in an economic and reliable manner; a cost benefit analysis of each option considered; and the utility’s assumptions and conclusions with respect to the effect of the plan on the cost and reliability of energy services, and its economic and environmental consequences. ER at 8.3-1 to 8.3-2. In making the need for power determination, the FPSC stated that it must consider

supply reliability, the need for base-load generating capacity, the need for adequate electricity at a reasonable cost, and whether the proposed plant is the most cost-effective alternative available [and] whether renewable energy sources or conservation measures taken by or

reasonably available to the utility might mitigate the need for the proposed plant.

FPSC Order at 4. Regional planning conducted by the FRCC considers historical and projected peak demand and energy; existing capacity; historical and projected demand and capacity; historical and projected capacity purchases, sales, and transfers; bulk electric transmission system description; and projected changes to the bulk electric transmission system. ER at 8.3-2. Thus, the Florida regulatory process is “comprehensive.” Petitioners do not address ER § 8.3.2 or otherwise challenge the comprehensiveness of the Florida regulatory process.

ER Section 8.3.3 describes how the Florida regulatory process is “subject to confirmation.” Among other things, the FPL need for power planning process is subject to rigorous review by multiple, independent parties, including the FPSC (and its Staff), the Florida Office of Public Counsel (who advocates on behalf of utility customers), and other public stakeholders. ER at 8.3-2. In granting the determination of need, the FPSC noted that its Staff “performed its own analysis of customer growth to examine sensitivities of variations of growth rate” and found that, “in the most extreme case” of zero customer growth rate for the next five years (2008-2012) followed by one year of growth at 50% of forecasted growth, FPL would still need 1,395 MW of additional capacity to achieve a 20% reserve margin by 2018 (FPSC Order at 6), thus supporting the ultimate FPSC determination of need for the Turkey Point units. The Florida need-for-power planning processes are also confirmable by comparing FPL forecasts to FRCC forecasts. ER at 8.3-2. The Florida and FRCC need-for-power analyses are subject to corroboration at the generator/supplier level (*e.g.*, FPL or another Florida utility) and by way of comparison to overall regional data. *Id.* Thus, there can be no question that the

Florida regulatory process is “subject to confirmation,” and Petitioners do not challenge that aspect of the Florida regulatory process.

ER Section 8.3.4 describes how the Florida regulatory process is “responsive to forecasting uncertainty.” When developing long-term load forecasts, FPL uses statistical modeling to quantify and qualify data inputs, such as economic projections and population trends in terms of their impact on the future demand for electricity. ER at 8.3-3. Uncertainty analysis is also used in establishing planning reserve margins, which themselves reflect uncertainty. *Id.* In addition, FPL evaluated other variations in future sensitivities, such as environmental laws and regulations and alternative fuel prices. For example, FPL incorporated uncertainty in its cost estimates regarding future environmental requirements. FPSC Order at 14. To do so, FPL analyzed possible future environmental compliance costs based on an independent report that reviewed domestic and international greenhouse gas emission regulations, which provided greenhouse gas allowance pricing projections out to the year 2030, which FPL extrapolated out to year 2060. *Id.* FPL also accounted for the uncertainty in alternative fuel price forecasts by developing high and low price forecasts based on its experience with oil, natural gas, and solid fuel commodities from 2000 to 2007. *Id.* at 26. Therefore, the FPSC need determination was based on a forecasting methodology that was “responsive to forecasting uncertainty” because it incorporated uncertainty by, among other things, using alternative scenario analysis. Again, Petitioners are silent regarding this discussion of how forecasting uncertainty is addressed in the ER.

Petitioners utterly fail to challenge any of the information contained in the ER or the underlying FPSC Order demonstrating that the Florida regulatory process is

systematic, comprehensive, subject to confirmation, and responsive to forecasting uncertainty. Petitioners' failure to include references to specific portions of the ER and explain why the ER is deficient renders Contention NEPA 8.2 inadmissible. Final Rule, 54 Fed. Reg. at 33,170; *Millstone*, CLI-01-24, 54 NRC at 358; *see also Palo Verde*, CLI-91-12, 34 NRC at 156.

Petitioners' remaining arguments are inconsequential and fall far short of the Commission's contention admissibility requirements in 10 C.F.R. § 2.309(f)(1).

As an initial matter, Petitioners' expert Dr. Cooper claims in his declaration that he noted in both his 2009 and 2010 testimony on nuclear cost recovery that the regulatory review process is "not well integrated or comprehensive" and that a full range of alternatives is not reviewed, and system wide need, resource flexibility, and excess capacity are not considered. Cooper Declaration at ¶ 8. However, an examination of the testimony pages cited to in the Declaration (2009 testimony at 33-36; 2010 testimony at 35-38, 42) reveals that Dr. Cooper nowhere discusses the NRC criteria for evaluating the sufficiency of the Florida need determination regulatory process or any of the information contained in the ER demonstrating that that process is systematic, comprehensive, subject to confirmation, and responsive to forecasting uncertainty. Thus, his testimony is irrelevant to the findings the NRC must make regarding the State need determination process and does not satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(iv).

Nor does Dr. Cooper's Declaration or the cited pages of his testimony support the arguments raised in the discussion of Contention NEPA 8.2. The pages cited do not discuss how the ten year site plan, the need determination, and the establishment of DSM

goals are not “integrated” with each other, as Petitioners assert (Petition at 61).⁵⁸ Consequently, the Cooper Declaration offers no support for Contention NEPA 8.2 as required by 10 C.F.R. § 2.309(f)(1)(v).⁵⁹

Petitioners claim that the Florida regulatory process is deficient because the need for power determination is not “integrated” with the annual ten year site plans developed by FPL in that the FPSC cannot change a determination of need after its review of a subsequently issued ten year site plan. Petition at 59. Petitioners’ broad assertion that the FPSC has no authority to change a prior determination of need is erroneous⁶⁰ and is again immaterial. Whether the FPSC can change a prior need determination, this argument fails to support the stated contention and to raise a genuine dispute on a material issue of law or fact. 10 C.F.R. §§ 2.309(f)(1)(v) and (vi). First, having “integrated” processes is not one of the NUREG-1555 criteria, thus this argument does not support the contention’s claim that Florida’s regulatory processes do not meet those criteria.

Second, Petitioners’ argument here suggests that Florida’s regulatory process would have to be considered unresponsive to forecasting uncertainty if a need

⁵⁸ Pages 33-36 of Dr. Cooper’s 2009 testimony address his “breakeven analysis” and “excess capacity. Pages 35-38 and 42 of Dr. Cooper’s 2010 testimony discuss natural gas; the new nuclear power plants proposed by Progress Energy, not FPL; new nuclear capital costs, and the “real” economics of nuclear reactors.

⁵⁹ Commission precedent is clear that Petitioners are required to identify the evidence on which they rely with specific references. Petitioners have failed to do so, and neither FPL nor the Commission is required to sift through Dr. Cooper’s testimony to search for a needle that may be in a haystack. *See Seabrook*, CLI-89-03, 29 NRC at 241. Thus, if the purported evidence is not on the cited pages, neither the Applicant nor the Commission need look any further.

⁶⁰ The Supreme Court of Florida has held that, while FPSC orders are subject to the doctrine of administrative finality, the FPSC may withdraw or modify a prior order if necessary in the public interest because of changed conditions or other circumstances not present in the proceedings that led to that order. *Peoples Gas System v. Mason, Inc.*, 187 So. 2d 335 (Fla. 1966).

determination cannot be changed in light of a subsequently issued ten year plan. Petitioners provide no support for their suggestion that the FPSC would attempt to relate a ten year site plan to a prior need determination. Indeed, the ER clearly states – during the discussion of ten year site plans – that “detailed evaluation of the need for power takes place during the second of the Florida three-component system, determination of need.” ER at 8.1-3. This contrasts with the role of the ten year site plan, which addresses resource requirements at an overall system level over the long term. *See* ER at 8.1-2 to 8.1-3. Petitioners provide no facts, expert opinion, or other basis to support its suggestion that a ten year site plan could override a need determination that has been made on the basis of a detailed review of a specific power plant. Thus, Petitioners’ suggestion fails 10 C.F.R. § 2.309(f)(1)(v). In any event, Petitioners’ suggestion is based on pure speculation about events that may very well not happen (i.e., a ten-year site plan that calls into question a prior need determination). Speculation is not adequate support for a contention. *Fansteel*, 58 NRC at 203. Furthermore, this argument fails to materially dispute the fact that the FPSC need determination process is responsive to forecasting uncertainty because it was based on, among other things, multiple alternative scenario analyses. *See* ER at 8.3-3, FPSC Order at 14, 26.

Petitioners also claim that the need determination process allows the applicant to “self determine the need for the project” because the FPSC “cannot make a finding of ‘imprudence’ related to cost recovery, for any reason, if it is in furtherance of nuclear power plant construction.” Petition at 60 (citing Fla. Stat. § 366.93, Cost recovery for the siting, design, licensing, and construction of nuclear and integrated combined cycle

power plants). There is no support for this claim. The cited statute says nothing that would prohibit the FPSC from finding nuclear construction costs imprudent. To the contrary, the statute requires the FPSC to establish by rule “alternative cost recovery mechanisms” that “allow for the recovery in rates of all *prudently incurred* costs.” Fla. Stat. § 366.93(2) (emphasis added). If the FPSC can allow recovery for only “prudently incurred” costs, then it must be able to determine whether certain costs are imprudently incurred.⁶¹

In any event, FPL did not “self-determine” the need for the project. Multiple parties participated in the need determination proceeding before the FPSC, including the Florida Office of Public Counsel, the FPSC Staff, and members of the public. ER at 8.1-4. Further, the FPSC found that FPL relied on independent sources and accepted economic and statistical practices when making forecast assumptions and calculating peak demands. FPSC Order at 5. And the FPSC Staff conducted its own analyses which confirmed the need determination. *Id.* at 6. Petitioners provide no support for their argument that FPL had “self-determined” the need for Turkey Point Units 6 & 7, and Petitioners nowhere challenge the independent confirmations of need relied on by the FPSC. Thus, this argument fails to support admission of the contention under 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

⁶¹ The statute’s implementing regulations nowhere indicate that the FPSC cannot find nuclear construction costs imprudent. FPSC Rule 25-6.0423, Nuclear or Integrated Gasification Combined Cycle Power Plant Cost Recovery, “establish[es] alternative cost recovery mechanisms . . . and allow[s] for the recovery in rates of all such *prudently incurred* costs.” FPSC Rule 25.6-0423(1), *available at* <https://www.flrules.org/gateway/RuleNo.asp?title=ELECTRIC%20SERVICE%20BY%20ELECTRIC%20PUBLIC%20UTILITIES&ID=25-6.0423> (emphasis added). Among other things, the Rule provides that the FPSC must annually hold a hearing to determine the prudence of actual nuclear construction costs. FPSC Rule 25-6.0423(5)(c)2.

Petitioners also assert that the Florida regulatory process is deficient because the FPSC 2008 determination of need could not consider the higher DSM goals enacted by FPSC after the need determination. Petition at 61. This assertion is misleading. Although the April 2008 need determination obviously could not consider the specifics of DSM goals enacted in December 2009, the FPSC did in fact consider the potential for higher DSM requirements, and found that there would be a need for the Turkey Point Units 6 & 7, even if DSM were to substantially increase. The FPSC found that if ““DSM . . . substantially increases,”” FPL will likely cancel natural gas-fired combined cycle plants rather than canceling Turkey Point Units 6 & 7. ER at 8.1-4 to 8.1-5 (quoting the FPSC Order). Furthermore, the FPSC acknowledged FPL’s anticipated 1,899 MW of DSM summer peak demand reduction by the year 2020 and found that there are ““no additional cost effective conservation measures available that might mitigate FPL’s need for Turkey Point 6 & 7.”” ER at 8.1-5 (quoting the FPSC Order). And the FPSC ultimately found that FPL could not achieve sufficient additional DSM savings over the next ten years to supplant the need for Turkey Point Units 6 & 7. ER at 8.1-5 to 8.1-6. Petitioners nowhere dispute these conclusions. Thus, Petitioners’ claim here materially disputes neither the need determination nor the process used to reach that determination, and offers no basis for the NRC to hesitate in relying on the Florida regulatory process.

Accordingly, Petitioners’ claims lack adequate support and have not raised a material dispute with the Application. 10 C.F.R. §§ 2.309(f)(1)(v) and (vi). The Board should reject Contention NEPA 8.2.

19. Contention NEPA 9 - Failure to address all reasonable DSM and renewable energy alternatives

FPL failed to adequately address in its ER all reasonable DSM and renewable energy alternatives to the construction and operation of Turkey Point Units 6 & 7

FPL Response

In support of Contention NEPA 9, Petitioners offer a hodgepodge of disconnected, speculative and irrelevant claims that do not add up to a material dispute with the Application. First, they allege that FPL’s DSM energy savings are “relatively weak” compared to those achieved by other utilities. Petition at 62. Then, they assert that the Application fails to provide any discussion of DSM goals recently enacted by the FPSC, which could affect demand and mitigate the need for Units 6 & 7, even if DSM could not totally supplant the need for the units. *Id.* Petitioners also allege that FPL must expand its discussion of DSM to consider “how major national research organizations’ findings and proposed federal legislation might affect the DSM landscape in Florida prior to the 2023 in-service timeframe for the first reactor.” *Id.* at 63. Petitioners’ further claim that FPL “inadequately addresses pending federal regulatory policy,” which “could radically alter the need for power and demand for alternatives.” *Id.* at 63-64. Finally, Petitioners assert that FPL failed to provide a “discussion of all new renewable generation capacity options under the [pending] regulatory framework.” *Id.* at 65.

Contention NEPA 9 is inadmissible because it is immaterial to the findings the Commission must make, lacks the required factual support, and fails to raise a genuine, material dispute with the Application. 10 C.F.R. §§ 2.309(f)(1)(iv), (v) and (vi).

With respect to Petitioners’ claims relating to the analysis of DSM as an alternative to operating Turkey Point Units 6 & 7, longstanding Supreme Court Precedent

holds that “the concept of alternatives must be bounded by some notion of feasibility.” *Vermont Yankee*, 435 U.S. at 551. NEPA’s “rule of reason” requires that in the context of alternatives analyses, “[a]gencies need only discuss those alternatives that are reasonable and ‘will bring about the ends’ of the proposed action.” *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001). Here, FPL’s elected purpose is “to address future baseload generation needs” with the construction of two nuclear units. ER at 9.0-1.

The ER analyzed alternatives to determine if they were competitive (i.e., feasible), capable of supplying baseload power, and favorably compared in terms of environmental and health impacts. ER at 9.2-1. Those alternatives deemed uncompetitive were eliminated from further discussion, while the competitive alternatives were carried forward for further analysis to determine if the alternative was environmentally preferable. *Id.* The ER’s analysis of competitive energy alternatives included those that do not require new generation capacity, including DSM programs as required by Commission precedent,⁶² but ultimately concluded that further DSM is not a competitive alternative. ER at 9.2-5 to 9.2-6. FPL’s DSM programs have “resulted in a cumulative summer peak reduction of approximately 4109 MW at the generator” and have “eliminated the need to construct the approximate equivalent of 12 new 400 MW generating units.” ER at 9.2-6. However, the ER concluded that, “[w]hile [DSM] programs will continue as an option to eliminate the need for additional capacity for FPL, *they will not be adequate to eliminate the required increase in baseload capacity.*” *Id.* (emphasis added). Indeed, as detailed in ER Chapter 8, the FPSC acknowledged FPL’s

⁶² See *Sumner*, CLI-10-01, 71 NRC ___, slip op. at 26.

anticipated 1,899 MW of DSM summer peak demand reduction in by the year 2020 and found that there are “no additional cost effective conservation measures available that might mitigate FPL’s need for Turkey Point 6 & 7.” ER at 8.1-5 (quoting the FPSC Order). The FPSC ultimately found that FPL could not achieve sufficient additional DSM savings over the next ten years to supplant the need for Turkey Point Units 6 & 7, (see ER at 8.1-5 to 8.1-6), concluding that it was “unrealistic” to assume additional cost-effective, incremental DSM to meet FPL’s demand needs. FPSC Order at 20. Thus, the ER reasonably concluded that additional DSM programs are “not considered a potentially competitive option to the baseload generation capacity” of proposed Turkey Point Units 6 & 7. ER at 9.2-6. As the U.S. Supreme Court ruled in *Vermont Yankee*, an infeasible alternative such as DSM need not be further considered.

Petitioners raise no alleged facts to challenge FPL’s and the FPSC’s DSM alternatives analysis that would support admitting Contention NEPA 9.

Initially, Petitioners assert that FPL’s DSM analysis was inadequate and not rigorous enough. Petition at 62. However, Petitioners do not provide facts to support their claims.⁶³ In reality, DSM was adequately considered and analyzed by FPL and the FPSC as discussed in the Application. Furthermore, nothing in Contention NEPA 9 suggests that DSM alone could be a reasonable substitute for the amount of baseload

⁶³ Petitioners contention hinges on federal caselaw that is inapplicable to the circumstances here, if not invalid altogether. Petitioners quote from *Citizens Against Toxic Sprays, Inc. v. Bergland*, 428 F.Supp. 908, 933 (D. Or. 1977) for the proposition that “[a]n alternative may not be disregarded merely because it does not offer a complete solution to the problem.” Petition at 62. The Oregon District Court cited *NRDC v. Morton*, 458 F.2d 827, 836 (D.C. Cir. 1972) for this proposition. However, the DC Circuit has long since narrowed, if not abandoned, this particular holding from *Morton*. In *City of Alexandria, Va. v. Slater*, 198 F.3d 862 (D.C. Cir. 1999), the DC Circuit questioned the continued validity of this specific holding in *Slater* in light of subsequent Supreme Court precedent criticizing the DC Circuit for over-reading NEPA’s mandate. 198 F.3d at 869 n.4. Furthermore, even if that particular *Morton* holding had any continued validity, *Slater* emphasized that it was limited to the circumstances present in *Morton*, which are not applicable here. *Id.* at 868-69.

power to be produced by Turkey Point Units 6 & 7. To the contrary, Petitioners do not dispute that DSM is an insufficient alternative to Turkey Point Units 6 & 7. *See* Petition at 62. Therefore, Petitioners have not proffered adequate support for a contention proposing DSM alone as an alternative. 10 C.F.R. §§ 2.309(f)(1)(v); *see also South Carolina Electric and Gas Co. (Virgil C. Summer Nuclear Station, Units 2 and 3) LBP-10-06*, 71 NRC __ (March 17, 2010), slip op. at 32 n.93.

Under NEPA’s “rule of reason,” it is unnecessary to analyze DSM as a competitive alternative to Turkey Point Units 6 & 7 where it is “unrealistic” for DSM to meet FPL’s demand needs. ER at 8.1-5 to 8.1-6; FPSC Order at 20; *Vermont Yankee*, 435 U.S. at 550-51. And, while Petitioners appear to vaguely suggest that DSM should be considered together with other alternatives (*see* Petition at 63), FPL evaluated combinations of alternatives that did not require the construction of new facilities, including the use of DSM, and concluded that no such combinations would replace the baseload capacity that Turkey Point Units 6 & 7 would provide. ER at 9.2-7. Petitioners do not challenge that analysis or its results.

Petitioners’ other DSM-related arguments fail to resuscitate the contention. Petitioners claim that the ER fails to discuss how the FPSC’s recently enacted DSM goals will affect demand and mitigate the need for Turkey Point Units 6 & 7. Petition at 62. This is incorrect. The ER states that the FPSC found that even if “‘DSM . . . substantially increases,’” the need for Turkey Point Unit 6 & 7 baseload power will not diminish because FPL will likely cancel natural gas-fired combined cycle plants. ER at 8.1-4 to 8.1-5 (quoting the FPSC Order). Petitioners nowhere materially dispute this finding, and thus the contention does not satisfy 10 C.F.R. § 2.309(f)(1)(vi). Petitioners also claim

that the ER fails to discuss how DSM could be improved so as to increase energy savings. Petition at 62. Increasing energy savings, however, is not the purpose of the proposed action. As previously discussed, the alternatives analysis is not required to consider alternatives that would not bring about the project's ends. Thus, this argument raises an issue that is immaterial to the findings the Commission must make. 10 C.F.R. § 2.309(f)(1)(iv).

Petitioners also assert that FPL's DSM energy savings are "relatively weak" compared to other utilities' DSM energy savings. Petition at 62. This assertion fails to support an admissible contention for the same reason an analogous assertion failed in *Sumner*. Contrary to the requirement in 10 C.F.R. § 2.309(f)(1)(v), nowhere do Petitioners indicate which specific programs might have led to these other utilities' greater energy savings, or that any such programs have been or could be implemented by FPL. Nowhere do Petitioners provide supporting information which correlates the energy efficiencies by these utilities to any achievable by FPL, or to any incremental capacity reductions which FPL might achieve from such incremental energy efficiencies. *See Sumner*, LBP-10-06, 71 NRC ___, slip op. at 18. And, in any case, for the reasons discussed above, increased DSM energy savings do not constitute a feasible alternative to Turkey Point Units 6 & 7.

Petitioners also claim that the ER "must" consider the potential of energy savings through national energy efficiency measures. Petition at 63. For support, Petitioners rely on (1) a McKinsey & Company finding that energy efficiency could cut consumption by up to 20 to 30 percent at costs lower than nuclear power; and (2) a study of the provisions of certain proposed federal legislation whose measures (if ever implemented) might

produce similar energy savings. *Id.* Among other shortcomings, Petitioners' speculative arguments here fail to provide facts that would support an admissible contention. 10 C.F.R. § 2.309(f)(1)(v). Petitioners fail to indicate with any specificity how the McKinsey & Company study or the proposed federal legislation "indicate energy usage could be reduced, or how, if at all, such methods might be applied by" FPL. *Summer*, LBP-10-06, 71 NRC ___, slip op. at 13 (finding inadmissible the portion of a contention asserting that the environmental report failed to address the potential for the U.S. economy to reduce energy usage through cost-effective efficiency).

Petitioners also point to a Florida-specific study that purportedly shows that "aggressive policies to reduce energy consumption" can lower demand by 20 percent at a lower cost than conventional sources. Petition at 63 (citing Petition Exhibit 36). However, Petitioners fail to relate these findings to the Application. Among other things, the cited report found that the "current course calls for investments in new coal, gas, and potentially new nuclear generation" to meet new demand and that "[e]nergy efficiency . . . can offset *some* of that growth in demand." Petition Exhibit 36 at 39 (emphasis added).⁶⁴ Nowhere do Petitioners attempt to justify how this finding, even if assumed correct, would negate the FPSC's findings that FPL could not achieve sufficient additional DSM savings over the next ten years to supplant the need for Turkey Point Units 6 & 7, and that if "DSM . . . substantially increases," the need for Turkey Point Units 6 & 7 baseload power will not diminish because FPL will likely cancel natural gas-fired combined cycle plants. ER at 8.1-4 to 8.1-6. Petitioners "fail to draw any

⁶⁴ As Petitioners have put this report before the Board, the entire report is subject to scrutiny, both as to those portions that support Petitioners' assertions and those that do not. *See, e.g., Vogtle ESP*, LBP-07-3, 65 NRC at 254.

connection between the generalized results they attribute to the report and either some failure of the analysis in the Application or any error or omission from [FPL's] programs, and fail to provide any reasoning to support the relevance of this report to [FPL's] programs or the analysis set out in the Application.” *Summer*, LBP-10-06, 71 NRC ___, slip op. at 16.

Petitioners also point to hypothetical renewable energy options that if developed could supplement energy efficiency measures. Petition at 64-65. Petitioners point to the renewable energy targets that would be set by pending Federal legislation, asserting that: (1) up to 8 percent of the Renewable Energy Standard (“RES”) target can be met through energy efficiency measures; (2) it would make sense to petition for the 8 percent energy efficiency contribution to the RES and “develop as much renewable energy as possible,” and (3) FPL must “provide discussion of all new renewable generation capacity options under the above regulatory framework.” *Id.* These claims fail the Commission’s contention admissibility requirements. For one, Petitioners nowhere dispute the ER’s detailed analysis of potential renewable energy alternatives (ER at 9.2-7 to 9.2-21), and therefore fail to materially dispute the Application. 10 C.F.R. § 2.309(f)(1)(vi). Petitioners cannot blithely assert that that FPL should “develop as much renewable energy as possible” without addressing the comprehensive and systematic analysis of alternative renewable energy options contained in the application, and why FPL (and the FPSC) found them to be non-competitive.

Furthermore, an alternatives analysis based on proposed federal legislation that may never be enacted is wholly speculative and beyond what is required by NEPA’s rule of reason. *See Slater*, 198 F.3d at 869 n.4 (doubting, in light of subsequent Supreme

Court Precedent, the continuing viability of the “rather expansive view of NEPA” that suggested reasonable alternatives would include Congress’ ability to change existing law or a federal agency’s authority to change its policies). The House of Representatives passes any number of pieces of legislation that never become law.⁶⁵ To suggest NEPA requires an applicant to conduct an alternatives analysis based on proposed legislation fails the Supreme Court’s admonition that an alternatives analysis “cannot be found wanting simply because the agency failed to include every alternative device and thought conceivable by the mind of man.” *Vermont Yankee*, 435 U.S. at 551.

For these reasons, Contention NEPA 9 is inadmissible as it fails to meet the criteria of 10 C.F.R. §§ 2.309(f)(1)(iv), (v) and (vi).

IV. SELECTION OF HEARING PROCEDURES

Commission rules require the Atomic Safety and Licensing Board designated to rule on the Petition to “determine and identify the specific hearing procedures to be used for the proceeding” pursuant to 10 C.F.R. §§ 2.310 (a)-(h). 10 C.F.R. § 2.310. The regulations are explicit that “proceedings for the . . . grant . . . of licenses subject to [10 C.F.R. Part 52] may be conducted under the procedures of subpart L.” 10 C.F.R. § 2.310(a). The regulations permit the presiding officer to use the procedures in 10 C.F.R. Part 2, Subpart G (“Subpart G”) in certain circumstances. 10 C.F.R. § 2.310(d). It is the proponent of the contentions, however, who has the burden of demonstrating “by reference to the contention and bases provided and the specific procedures in subpart G

⁶⁵ The legislation in question passed the House by a vote of 219-212 on June 26, 2010. It was introduced in the U.S. Senate on July 7, 2010 but has not fared as well. It appears that the legislation will not be considered this year. Carl Hulse and David M. Herszhenhorn, *Democrats Call Off Climate Bill Effort*, N.Y. Times, July 22, 2010, available at http://www.nytimes.com/2010/07/23/us/politics/23cong.html?_r=1.

of this part, that resolution of the contention necessitates resolution of material issues of fact which may be best determined through the use of the identified procedures.” 10 C.F.R. § 2.309(g). Petitioners did not address the selection of hearing procedures in their Petition and, therefore, did not satisfy their burden to demonstrate why Subpart G procedures should be used in this proceeding. Accordingly, any hearing arising from the Petition should be governed by the procedures of Subpart L.

V. CONCLUSION

For all of the foregoing reasons, the Petition should be denied.

Respectfully Submitted,

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September 13, 2010

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
Florida Power & Light Company)	Docket Nos. 52-040-COL
)	52-041-COL
(Turkey Point Units 6 & 7))	
)	ASLBP No. 10-903-02-COL
(Combined License))	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing “Florida Power & Light Company’s Answer Opposing Mark Oncavage, Dan Kipnis, Southern Alliance for Clean Energy, and National Parks Conservation Association’s Petition to Intervene and Request for Hearing On Turkey Point Units 6 & 7 Combined Construction and Operating License Application,” were provided to the Electronic Information Exchange for service to those individuals listed below and others on the service list in this proceeding, this 13th day of September 2010.

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