

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
FLORIDA POWER & LIGHT CO.)	Docket No. 50-250-LA
)	50-251-LA
(Turkey Point Nuclear Generating)	
Units 3 and 4))	

NRC STAFF'S PROPOSED FINDINGS OF FACT
AND CONCLUSIONS OF LAW CONCERNING CONTENTION 1

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March 28, 2016

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I. INTRODUCTION

1.1 In accordance with 10 C.F.R. § 2.1209 and the Atomic Safety and Licensing Board's ("Board") Orders,¹ the NRC Staff ("Staff") hereby submits its proposed findings of fact and conclusions of law ("Proposed Findings") regarding Contention 1. In Contention 1, Citizens Allied for Safe Energy ("CASE") challenges the Staff's Environmental Assessment ("EA") prepared for license amendments regarding the Turkey Point Nuclear Generating Units 3 and 4 ("Turkey Point") Ultimate Heat Sink ("UHS").

1.2 For the reasons set forth herein, the Staff submits that the contention should be resolved in favor of the Staff and the Board affirm that the Staff has met its burden of demonstrating that the EA complies with the National Environmental Policy Act ("NEPA") and the Commission's regulations at 10 C.F.R. Part 51.

¹ See Initial Scheduling Order, at 10 (May 8, 2015) (Agencywide Documents and Management System (ADAMS) Accession No. ML15128A369); Order (Adopting Transcript Corrections and Closing Evidentiary Record), at 2 (Feb. 17, 2016) (ADAMS Accession No. ML16048A172); Order (Taking Official Notice and Ordering Briefing), at 2 (Feb. 26, 2016) (ADAMS Accession No. ML16057A339); and Order (Clarifying Scope of Proposed Findings of Fact and Conclusions of Law and Amending Initial Scheduling Order) (Mar. 11, 2016) (ADAMS Accession No. ML16071A278).

The Staff also provides its briefing on the three legal issues raised by the Board (i.e., segmentation, reliance on state actions, and the legal meaning and effect of a February 15, 2016, order by a Florida administrative judge (“Recommended Order”). For the reasons discussed below, the Staff submits that there was no improper segmentation or improper reliance on state actions and that the non-binding and non-final Recommended Order does not change the legal assumptions underlying the Staff’s testimony or the EA’s conclusions regarding state mitigation measures.

II. BACKGROUND

A. The Proposed Action

2.1 On July 10, 2014, Florida Power & Light Company (“FPL”) filed a license amendment request (“LAR”).² (Exhibit (“Ex.”) FPL-008). The LAR sought to change the operating license for Turkey Point Units 3 and 4 by raising the ultimate heat sink (“UHS”) temperature limit in the Turkey Point Technical Specification (“TS”) 3.7.4 from 100 °F to 104 °F, including requiring monitoring every hour when average intake temperature from the UHS exceeds 100 °F.³ The LAR also sought to increase the surveillance frequency for the component cooling water heat exchangers’ performance tests and minor editorial changes for clarity. (Ex. NRC-006 at 1, 28; Ex. NRC-012 at 5-6).

2.2 The Turkey Point site is situated on the shore of Biscayne Bay about 25 miles (“mi”) south of Miami, Florida. The site encompasses 11,000 acres (“ac”) in Miami-Dade County, Florida. The nearest city limits are Florida City, which lies 8 mi to the west, Homestead,

² FPL initially filed the request on July 10, 2014. The request was supplemented by eight (8) letters from July 17, 2014, through August 4, 2014. Ex. NRC-006 at 1. On July 29, 2014, the licensee supplemented its amendment request expanding the scope of the amendment previously noticed in the Federal Register. Ex. NRC-006 at 1.

³ The specific change was to TS Limiting Condition for Operation (“LCO”) 3.7.4., which previously required that during operational modes 1 – 4 (POWER OPERATION, STARTUP, HOT STANDBY, AND HOT SHUTDOWN), the UHS be operable with an average supply water temperature less than or equal to 100 °F, and subsequently allowed those four modes of operation with average UHS supply water temperature of less than or equal to 104 °F.

which lies 4.5 mi to the northwest, and Key Largo, which lies 10 mi south of the Turkey Point site. The Turkey Point site is bordered to the east by Biscayne National Park, to the north by Homestead Bayfront Park and a portion of Biscayne National Park, and on the west and south by FPL's 13,000-ac Everglades Mitigation Bank. (Ex. NRC-001 at 13).

2.3 The Turkey Point site employs the use of fossil, combined cycle, and nuclear units operated by FPL for commercial electric power generation. (*Id.*). Turkey Point Units 3 and 4 are the nuclear reactor units that are rated at about 888 MWe (2644 MWt) each. The units are Westinghouse-designed pressurized light water moderated and cooled systems. (Ex. NRC-001 at 14).⁴

2.4 The UHS at Turkey Point consists of a cooling canal system ("CCS") which provides cooling for the intake cooling water ("ICW") system and the Circulating Water ("CW") system. (Ex. NRC-001 at 14; EX-NRC-006 at 13). The CW system provides cooling water to the main plant condensers, and the ICW system removes heat loads from the Component Cooling Water ("CCW") system during normal and accident conditions to support both reactor and containment heat removal requirements as well as spent fuel cooling requirements. (Ex. FPL-008 at 6-7; Ex. NRC-006 at 13).

2.5 The CCS occupies an area approximately 2 miles wide by 5 miles long and includes 168 miles of earthen canals covering approximately 4370 acres of water surface. Heated water is discharged into the CCS, which returns cooled water back to the units. The average canal depth is 2.8 feet. The entire circulation route from the plant discharge back to plant intake is 13.2 miles and takes approximately 44 hours to complete. The CCS is shared by

⁴ Turkey Point Units 1 and 2 are oil and gas-fired units (since late 2010 Unit 2 has been operated as a synchronous condenser); Unit 5 is a combined cycle unit that employs four natural gas turbines and one heat-recovery steam-powered generator. (Ex. NRC-001 at 13-14). The NRC is reviewing FPL's 2009 COL application to build two more nuclear units, Units 6 and 7. (Ex. NRC-001 at 14). Throughout the Staff's testimony and in these findings of fact, "Turkey Point" is used interchangeably with Turkey Point Units 3 and 4. Any reference to Units 1, 2, and 5 or the proposed Units 6 and 7 will be indicated as such.

Turkey Point Units 3 and 4, and fossil fuel Units 1 and 2. (Ex. FPL-008 at 6-7; Ex. NRC-006 at 13). Unit 5 also uses it for blowdown. (Ex. NRC-001 at 27-28). A diagram of the CCS is provided in Ex. NRC-001 at page 18 and Ex. NRC-032 (FPL's Environmental Report) at 14.

2.6 In the summer of 2014, UHS temperatures approached and exceeded the 100 °F TS limit on several occasions. Prior to the amendment request, exceedance of the 100 °F limit in TS 3.7.4 required FPL to place Units 3 and 4 in hot standby within 12 hours, and cold shutdown within 30 hours, if the average supply temperature to the inlet to the component cooling water heat exchangers remained above 100 °F. (Ex. FPL-008). On July 17, 2014, FPL asked the NRC to process the UHS LAR on an emergency basis, pursuant to 10 C.F.R. § 50.91(a)(5). FPL stated that loss of load and voltage control resulting from a forced shutdown during periods of high summer demand could impact grid reliability. (Ex. NRC-011 at 3).

2.7 By letter dated July 23, 2014, the NRC granted a notice of enforcement discretion ("NOED") and informed the licensee that the NRC would not enforce compliance with TS 3.7.4 if the UHS temperature exceeded 100 °F and remained under 103 °F, for a period of no more than 10 days, as well as several other NOED exit criteria. This NOED was later extended for another 10 days, which is consistent with the additional time required for the Staff to complete its review of FPL's UHS license amendment request ("LAR"). (Ex. NRC-018 at 1-2). The Staff determined that, although FPL requested that the NRC process the LAR under emergency circumstances, there was sufficient time to process the LAR as exigent, pursuant to 10 C.F.R. § 50.91(a)(6). (Ex. NRC-006 at 30).

B. The Staff's NEPA Review

2.8 In response to the UHS LAR, the Staff prepared a biological assessment ("BA"), an environmental assessment ("EA"), and a finding of no significant impact ("FONSI"). (Exs. NRC-006 at 30-33, 38; NRC-009, NRC-010).⁵ The Staff consulted with the State of Florida

⁵ The Staff also prepared a safety evaluation as part of its review. However, the Staff's safety review is not at issue in this proceeding.

(“State” or “Florida”) and the U.S. Fish and Wildlife Service (“FWS”) before issuing the license amendments. (Exs. NRC-006 at 1;32; NRC-009; NRC-010 at 4; NRC-019; NRC-020; NRC-021).

2.9 To satisfy the noticing requirements for exigent amendments, the Staff published several notices regarding the license amendments, the EA, and/or the BA in various locations including the *Federal Register* and local newspapers. (Exs. NRC-007; NRC-008; NRC-009; NRC-041).

2.10 On July 30, 2014, the Staff published its (1) finding that exigent circumstances existed such that the Commission could not allow 30 days for public comment prior to acting on FPL’s LAR; and (2) proposed determination that the license amendment request involved no significant hazards considerations. (Ex. NRC-007 at 2-3). On July 31, 2014, the Staff’s EA and FONSI were published in the *Federal Register*. (Ex. NRC-009).

2.11 The EA provided a brief discussion regarding whether to prepare an EIS or a FONSI. (Ex. NRC-009 at 44,464). The EA identified the proposed action. (*Id.* at 44,465). The EA included a brief discussion of (1) the need for the proposed action (*Id.* at 44,466), (2) alternatives to the proposed action (*Id.* at 44,469), and (3) the environmental impacts of the proposed action and alternatives (Ex. NRC-009). The EA listed the agencies and persons consulted (*Id.* at 44,469), and identified sources used to prepare the EA (*Id.* at 44,470).

2.12 In its EA, the Staff found that the license amendments would not have any impacts on groundwater resources beyond those already discussed in prior EAs, including the EA done for the 2012 extended power uprate (“EPU”), and environmental impact statements (“EIS”) for the Turkey Point Site. (*Id.* at 44,466; See Ex. NRC-022 (“EPU EA”); Ex. NRC-024 (“EIS for License Renewal”); Ex. NRC-047 (“EIS for Operating License”)). These previous environmental analyses were incorporated by reference into the EA. (Tr. at 430, line 25; Tr. at 431, lines 1 - 3).

2.13 The Staff's EA also concluded that the proposed action would result in no significant impacts on aquatic resources. (Ex. NRC-009 at 44,467, Ex. NRC-001 at 37).

2.14 The EA incorporated by reference the Staff's BA (Ex. NRC-010) and concluded that the proposed action was not likely to adversely affect any Federally-protected species or affect any designated critical habitat. (Ex. NRC-009 at 44,467, Ex. NRC-001 at 37).

2.15 The EA documented the Staff's consultation with the US. Fish and Wildlife Service, with whom the Staff consulted under section 7 of the Endangered Species Act, and with the State of Florida official from the Florida Department of Health. (Ex. NRC-009 at 44,469).

2.16 The EA noted that temperature increases would increase water evaporation rates and result in higher salinity levels in the CCS during periods of peak summer air temperatures and low rainfall, but that this effect would be temporary and short in duration because salinity would again decrease upon natural freshwater recharge of the CCS. The EA also noted that these conditions may not be experienced at all depending on site and weather conditions. (*Id.* at 44,466).

2.17 Based on its determination that the license amendments would have no significant impacts on the environment, the Staff prepared a FONSI that incorporated the EA by reference. (Ex. NRC-001 at 38; Ex. NRC-009 at 44,469).

2.18 On August, 8, 2014, the Staff granted the LAR. (Ex. NRC-006). On August 14, 2014, notice was published in the *Federal Register* that the license amendments were approved and that the opportunity to request a hearing had been extended. (Ex. NRC-042).

C. State Actions Related to the CCS

2.19 In addition to seeking the NRC's approval of the UHS LAR, FPL sought and obtained permission from Florida to take a variety of actions related to the CCS. For example,

- i. FPL sought and on June 27, 2014, obtained permission from the State to treat the CCS for blue-green algae using a combination of copper sulfate,

hydrogen peroxide, and a bio-stimulant. (Ex. NRC-009 at 44468; NRC-010 at A1-A4, A25-A28).

- ii. FPL sought and on June 27, 2014, the State approved an amendment to its Site Certification that authorized the temporary reallocation of up to 5 million gallons of water per day (“MGD”) of Floridan Aquifer water that was originally allocated for Unit 5 to be withdrawn to mitigate CCS conditions. (Ex. FPL-001 at 16; FPL-010).
- iii. FPL sought a modification to its Site Certification on September 5, 2014, to allow FPL, among other actions, to extract up to 14 MGD from the Upper Floridan aquifer for use in the CCS. (Exs. FPL-027, 028). FPL sought this modification to comply with the State’s anticipated Administrative Order that would require FPL to develop a salinity management plan to reduce salinity in the CCS to 34 psu within 4 years. (Ex. FPL-001 at 37, 43; Ex. NRC-001 at 56).⁶ On December 23, 2014, the State issued a notice of intent to approve FPL’s requested actions, but on March 19, 2015, the State issued a Final Order that approved two of the requested actions but did not include authorization to construct and operate the new wells that would be required to withdraw water from the Upper Floridan Aquifer due to a pending challenge to this requested action. (Ex. FPL-001 at 38; FPL-028). On January 25, 2016, a State Administrative Law Judge recommended that the State issue a Final Order

⁶ On February 17, 2016, FPL notified the Board and parties that the Administrative Law Judge considering a challenge to the DEP’s administrative order issued a Recommended Order. See FPL’s Second Notice to the Board Regarding State Administrative Proceeding (Feb. 17, 2016) (ADAMS Accession No. ML16048A546). FPL sent the parties a copy of the Recommended Order. On February 26, 2016, the Board issued an order taking official notice of the Recommended Order as an official record in a state administrative proceeding and directed the parties to address the significance of the Recommended Order in their findings of facts and conclusions of law. On March 10, 2016, the Board issued an order clarifying the official notice and required briefing. The Staff provides the required briefing below.

approving the construction and operation of the new wells. (State of Florida Recommended Order dated January 25, 2016.). This matter is now pending before the Governor and Cabinet in their capacity as the State Siting Board. (State of Florida Recommended Order dated February 15, 2016 at 32).

- iv. The State also approved FPL's request for both emergency and short term withdrawals of water from the L-31E canal for use in the CCS on August 28, 2014, April 9, 2015, and May 19, 2015. (Exs. FPL-031, 033, 034). In a related administrative hearing, the State also recommended the approval of FPL's request to withdraw up to 100 MGD from the L-31E canal between the months of June and November in 2015 and 2016. (Ex. FPL-037). The administrative law judge recommended approving FPL's request. *Id.*

2.20 In making its FONSI, the Staff accounted for the State actions that had been taken and those that the State was contemplating at the time of the Staff's UHS LAR review. In particular, in making the finding that the license amendments would have no effect on surface water resources, the Staff relied on the State's assessment that the withdrawals authorized by the State would have no impacts to fish and wildlife resources or other surface water resources. (Tr. at 473, lines 10-18 and 21). The Staff also relied on the State's assessment and the longer term mitigative actions that FPL and the State have been pursuing to determine that the license amendments would not have a significant effect on the aquifers. (*Id.* at 474, lines 2-8; 13-16).

III. PROCEDURAL HISTORY

A. Petition to Intervene

3.1 On October 14, 2014, CASE filed a timely petition to intervene on the UHS LAR, submitting four contentions for the Board's consideration, including Contention 1. Citizens Allied for Safe Energy, Inc. Petition to Intervene and Request for a Hearing (Oct. 14, 2014) (ADAMS

Accession No. ML14290A510) ("CASE's Petition"). As originally proposed, Contention 1 claimed "[t]he uprate of Turkey Point reactors 3 & 4 has been concurrent with alarming increases in salinity, temperature, tritium and chloride in the CCS area." CASE Petition at 5 (emphasis omitted).

3.2 The Staff and FPL opposed admission of Contention 1 on the grounds that CASE lacked standing and that the contention failed to meet the NRC's contention admissibility requirements. NRC Staff's Answer to Citizens Allied for Safe Energy, Inc.'s Petition for Leave to Intervene and Request for Hearing (Nov. 10, 2014) (ADAMS Accession No. ML14314A874 ("NRC Staff Answer"); FPL's Answer to Citizens Allied for Safe Energy, Inc.'s Petition to Intervene and Request for a Hearing (Nov. 10, 2014) (ADAMS Accession No. ML14314B019) ("FPL Answer"). CASE submitted a consolidated reply to the Staff's and FPL's answers. [CASE's] Reply to FPL and to NRC Staff Answers to Its Petition to Intervene and Request for a Hearing (Nov. 17, 2014) (ADAMS Accession No. ML14324A042) ("CASE's Reply").

3.3 CASE's Reply contained new arguments and references not contained in its Petition to Intervene. On November 28, 2014, FPL moved to strike those new arguments and references. [FPL's] Motion to Strike New Arguments and References in CASE's Reply (ADAMS Accession No. ML14332A008). The Board granted in part and denied in part FPL's motion. The Board granted FPL's motion with respect to the majority of the new arguments CASE presented in its reply and those parts of CASE's reply that relied on the new references. *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Unit 3 and 4) LBP-15-13, 81 NRC 456, 479 (2015). However, the Board denied FPL's motion with respect to CASE's arguments regarding the effects of fresh water withdrawals and impacts to fresh water. *Id.* The Board found CASE's argument on this topic to be an amplification of its concerns regarding freshwater, including aquifer withdrawals, in CASE's Petition. *Id.*

B. Contention 1 Admitted, as Reformulated By the Board

3.4 After oral argument,⁷ the Board found CASE had standing because CASE's members could be harmed by withdrawal of freshwater to be used in the CCS and because allowing Units 3 and 4 to operate at a higher temperature could increase the need for such withdrawals. *Florida Power & Light Company* (Turkey Point Generating Units 3 and 4), LBP-15-13, 81 NRC 456, 465-67 (2015) ("LBP-15-13").

3.5 The Board admitted a narrowed and reformulated version of CASE's Contention 1. As admitted, Contention 1 states that:

The NRC's environmental assessment, in support of its findings of no significant impact related to the 2014 Turkey Point Units 3 and 4 license amendments, does not adequately address the impact of increased temperature and salinity in the CCS on saltwater intrusion arising from (1) migration out of the CCS; and (2) withdrawal of fresh water from surrounding aquifers to mitigate conditions within the CCS.

LBP-15-13, 81 NRC at 476.

3.6 In narrowing the contention, the Board eliminated areas where CASE alleged the omission of information that was, in fact, discussed in the EA. In particular, the Board did not admit CASE's claims regarding the environmental impacts associated with the use of copper sulfate, and other chemicals, in the CCS. *Turkey Point*, LBP-15-13, 81 NRC 456 at 478. Likewise, the Board did not admit CASE's radiological claims, finding them to be direct challenges to the NRC's 2012 issuance of license amendments to FPL for an EPU. *Id.* The Board also struck several arguments raised for the first time in CASE's reply. *Id.* at 475-79.

C. FPL and Staff's Appeals

3.7 The Staff and FPL appealed the Board's decision granting a hearing to CASE. NRC Staff's Notice of Appeal of LBP-15-13 (Apr. 17, 2015) (ADAMS Accession No. ML15107A390); Florida Power & Light Company's Notice of Appeal of LBP-15-13 (Apr. 17, 2015) (ADAMS Accession No. ML15107A410).

⁷ The Board held oral argument on CASE's Petition on January 14, 2015, in Homestead, Florida.

3.8 FPL also moved to stay the hearing pending the Commission's decision on appeal. Florida Power & Light Company's Motion to Stay Hearing Pending Commission Review of its Appeal (Apr. 17, 2015) (ADAMS Accession No. ML15107A413). On May 8, 2015, the Board denied FPL's motion. Order (Denying FPL's Motion to Stay Hearing) (unpublished) (May 8, 2015) (ADAMS Accession No. ML15128A368).

3.9 After considering the arguments on appeal, the Commission affirmed the Board's decision. *Florida Power & Light Co.* (Turkey Point Nuclear Generating Units 3 and 4), CLI-15-25, 82 NRC __ (Dec. 17, 2015). In affirming the Board's decision, the Commission stated that it was not appropriate to revisit previous environmental analyses for Turkey Point (including the EA for the EPU) in this proceeding. See *Turkey Point*, CLI-15-25, 82 NRC __ (slip op. at 14, 20). The Commission found no error in the Board's interpretation of Contention 1 as challenging the adequacy of the EA's discussion of current and reasonably foreseeable environmental conditions. *Turkey Point*, CLI-15-25, 82 NRC __ (slip op. at 15) (citing LBP-15-13, 81 NRC at 471).

3.10 The Commission also noted that while CASE requests studies and corrective actions to be taken regarding the conditions in the CCS, NEPA does not require the NRC to create information that does not currently exist or impose mitigation measures. *Turkey Point*, CLI-15-25, 82 NRC __ (slip op. at 9-10 n. 46).

3.11 The Commission also clarified that the issue of whether the Staff consulted the correct state official when preparing its EA was not raised by CASE and is not properly encompassed within Contention 1 as admitted. *Id.* at 23-24 n. 110.

3.12 In sum, the Commission found no error in the Board's holding that CASE articulated a genuine dispute with regard to the EA on the question of whether the EA

contains a sufficient discussion of the current baseline environmental conditions and the reasonably foreseeable environmental impacts of increased temperature and salinity in the cooling canal system on saltwater intrusion arising from migration out of the system and the withdrawal of fresh water from surrounding aquifers to mitigate conditions within the system, and, with respect to this issue,

the 'reasons why the proposed action will not have a significant effect on the quality of the human environment.'

Id. at 23.

D. CASE's Statement of Position and Related Motions

3.13 On October 9, 2015, CASE filed its initial statement of position ("CASE's SOP"), which included several attachments, and numerous references to items that were not provided as exhibits. (Ex. INT-000).⁸ CASE's SOP did not include testimony, supporting affidavits or an exhibit list, and CASE failed to serve the Staff with several attachments. On October 14, CASE provided Attachments 1 and 3 (ADAMS Nos. ML15288A336 and ML15288A335, respectively).

3.14 As a result of CASE's failure to properly file its SOP and exhibits in accordance with the Board's order and the Commission's regulations, the Staff and FPL sought and were granted an extension of time to file their initial SOP, testimony, and exhibits. NRC Staff's Unopposed Motion for an Extension of Time for the Filing of Testimony, Exhibits, and Statement of Position (Oct. 15, 2015) (ADAMS Accession No. ML15288A348); Order (Granting Request for Extension of Time) (unpublished) (Oct. 19, 2015) (ADAMS Accession No. ML15292A408). The Board's October 19, 2015 order set November 10, 2015 as the date by which FPL and the Staff had to file written testimony, exhibits, and statements of position, shifted all other subsequent filings forward by eleven days, and noted that the extension would not change the Board's plan to hold an evidentiary hearing during the week of January 11, 2016. The Board then issued an order requiring proper numbering of CASE's exhibits. Order (Requiring Proper Numbering of CASE's Exhibits) (unpublished) (Oct. 21, 2015) (ADAMS Accession No. ML15294A316). CASE did not fully comply with this order.

3.15 On October 19, 2015, FPL filed a motion to strike portions of CASE's SOP. [FPL's] Motion to Strike Portions of CASE's "Initial Statement of Position, Testimony, Affidavits

⁸ See Board's Initial Scheduling Order at 8 (directing CASE to file its initial written statement of position, written testimony with supporting affidavits, and exhibits, pursuant to 10 C.F.R. § 2.1207(a)(1) by October 9, 2015).

and Exhibits” or, in the Alternative, Motion *In Limine* to Exclude It and Its Cited Documents from Evidence (Oct. 19, 2015) (ADAMS Accession No. ML15292A564). The Staff supported FPL’s motion to the extent that FPL identified portions of CASE’s filings that were outside the scope of Contention 1, as admitted. NRC Staff’s Answer to [FPL’s] Motion to Strike Portions of CASE’s “Initial Statement of Position, Testimony, Affidavits and Exhibits” or, in the Alternative, Motion *In Limine* to Exclude It and Its Cited Documents from Evidence (Oct. 26, 2015) (ADAMS Accession No. ML15299A026). CASE opposed FPL’s motion. CASE Answer to FPL Motion to Strike Portions of CASE’s October 9, 2015 Filing (Oct. 29, 2015) (ADAMS Accession No. ML15302A190).

3.16 On November 3, 2015, CASE filed a motion requesting the Board to subpoena five witnesses. CASE Motion Requesting Subpoenas for Expert Witnesses for January 2016, Evidentiary Hearing (Nov. 3, 2015) (ADAMS Accession No. ML15307A470). CASE also requested that the NRC pay for witnesses’ per diem expenses. *Id.* at 3. The Board denied CASE’s motion on November 12, 2015, but indicated that CASE could renew its request. Order (Denying CASE’s Application for Subpoenas) (unpublished) (Nov. 12, 2015) at 2-3 (ADAMS Accession No. ML15316A424).

3.17 On November 10, 2015, the Staff filed its Initial and Rebuttal Statement of Position on Contention 1 (“Staff’s SOP”). The Staff’s SOP was accompanied by pre-filed testimony of Audrey L. Klett, Briana A. Grange, William Ford, and Nicholas P. Hobbs, and supporting exhibits. (Ex. NRC-001 through NRC-049).

3.18 On November 10, 2015, FPL filed its Statement of Position on Contention 1 (“FPL’s SOP”). FPL’s SOP was accompanied by pre-filed testimony of Steven D. Scroggs, Jim M. Bolleter, and Peter F. Andersen, and supporting exhibits (Ex. FPL-001 through FPL-036). On November 17, 2015, FPL submitted a revised version of exhibit FPL-032 (FPL-032R). FPL’s Notice of Revised Exhibit (Nov. 17, 2015) (ADAMS Accession No. ML15321A473).

3.19 On November 17, 2015, FPL filed an unopposed motion for an extension of time to file a motion for summary disposition. [FPL's] Unopposed Motion for Extension of Time to File Motions for Summary Disposition (Nov. 17, 2015) (ADAMS No. ML15321A477). On November 19, 2015, the Board granted in part FPL's request. Order (Granting in Part Extension for Summary Disposition Motions) (Nov. 19, 2015) (ADAMS No. ML15323A028).

3.20 On December 1, 2015, CASE filed its Rebuttal Statement of Position in support of Contention 1. ("CASE's Rebuttal" or "Rebuttal SOP"). CASE's Rebuttal contained an affidavit and testimony of Dr. Philip K. Stoddard. (Ex. INT-076).

3.21 On December 9, 2015, CASE filed a second motion requesting subpoenas for its prospective expert witnesses for the January 2016 evidentiary hearing. CASE Second Motion Requesting Subpoenas for Expert Witnesses for January, 2016 (Dec. 9, 2015) (ADAMS No. ML15343A354). Both FPL and the Staff opposed CASE's motion. NRC Staff's Answer Opposing CASE Motion Requesting Subpoenas for Expert Witnesses for January 2016 Evidentiary Hearing (Dec. 15, 2015) (ADAMS No. ML15349A013); [FPL's] Answer to CASE's Second Motion Requesting Subpoenas for Expert Testimony for Evidentiary Hearing (Dec. 15, 2015) (ADAMS Accession No. ML15349A791). The Board denied CASE's second motion on December 22, 2015.

3.22 On December 14, 2015 the Staff filed a motion *in limine* to exclude portions of CASE's prefiled rebuttal testimony or in the alternative to strike portions of CASE's rebuttal testimony and SOP (ADAMS Accession No. ML15348A013). In particular, the Staff moved to strike: testimony of Dr. Phillip K. Stoddard (CASE's Rebuttal at 4-11); other statements attributed to Dr. Stoddard in CASE's SOP (*Id.* at 26, 27); arguments related to the American Crocodile and other flora and fauna (CASE's Rebuttal at 6-9, 37, 41-43); arguments related to the time used to prepare the EA (*Id.* at 38-39); arguments related to the consultations with various federal agencies (*Id.* at 43); and arguments related to the discussion of alternatives (*Id.* SOP at 40-41).

3.23 On December 15, 2015, FPL filed an answer supporting the Staff's motion *in limine*. [FPL's] Answer Supporting the NRC Staff's Motion In Limine (Dec. 15, 2015) (ADAMS Accession No. ML15349A036). CASE filed an answer on December 22, 2015. CASE Answer to NRC Staff's Motion In Limine to Exclude Portions of the Prefiled Rebuttal Testimony or in the Alternative Strike Portions of the Prefiled Rebuttal Testimony and Rebuttal Statement of Positions (Dec. 22, 2015) (ADAMS Accession No. ML15356A769).

3.24 The Board granted in part and denied in part FPL's and the Staff's motions to strike CASE's initial and rebuttal evidence. See Order (Denying Application for Subpoenas, Denying Motion for Summary Disposition, and Granting in Part and Denying in Part Motion to Strike) at 1-2, 8-9 (Dec. 22, 2015). In particular, the Board struck:

- a. CASE's argument concerning the potential environmental impact of certain chemicals in the CCS and the need for additional monitoring for these chemicals in the CCS. *Id.* at 13 and Appendix A.
- b. An excerpt related to the double-crested cormorant. *Id.* at 13.
- c. The "Bacchus Paper" which discussed various negative impacts on wildlife due to "groundwater alterations." *Id.* at 14.
- d. Two NEPA-related arguments —namely: (1) CASE's claim that the NRC Staff failed to consult with the U.S. Fish and Wildlife Service, and (2) CASE's claim that the NRC Staff failed to adequately consider alternatives to granting the proposed license amendment. *Id.* at 15.
- e. Those portions of CASE's rebuttal statement that relate to the timing of the EA, the NRC Staff's consultation with other agencies, and the NRC Staff's review of alternatives to the proposed action. *Id.* at 16.

E. FPL's Motion to Dismiss or for Summary Disposition

3.25 On December 3, 2015, FPL moved for dismissal of Contention 1, or in the alternative, summary disposition. [FPL's] Motion to Dismiss Case Contention 1 or, in the

Alternative, for Summary Disposition (ADAMS Accession No. ML15337A422) (“FPL Motion for Summary Disposition”). FPL argued that further proceedings are unnecessary because CASE failed to submit any testimony or relevant documentary evidence in support of its standing to challenge the UHS license amendment while the unrebutted testimony of FPL and the Staff demonstrates that CASE does not, in fact, have standing. *Id.* at 1. Further, FPL argued that summary disposition on Contention 1 was warranted because there are no genuine disputes as to any fact material to Contention 1 and FPL and the Staff are entitled to judgment as a matter of law. *Id.* at 1-2.

3.26 Along with its Motion for Summary Disposition, FPL submitted a list of 23 material facts of which no genuine dispute exists. Those facts related to the Staff’s review in response to the UHS (facts 1 - 5), the environmental impacts of the UHS license amendments (facts 6 - 9), the environmental impacts of the upper Floridan aquifer withdrawals (facts 10 – 15), the environmental impacts of the Biscayne aquifer withdrawals (facts 16 – 19), and the environmental impacts of the L-31E canal withdrawals (facts 20 – 22). See Statement of Material Facts on Which No Genuine Dispute Exists (Dec. 3, 2015) (ADAMS Accession No. ML15337A423).

3.27 On December 13, 2015, CASE responded that the proceeding should go forward because a hearing is necessary to resolve the dispute over the impacts of FPL’s freshwater withdrawals from the L-31E Canals and FPL’s “nearly freshwater” withdrawals from the Upper Floridan Aquifer. [CASE’s] Answer to [FPL’s Motion for Summary Disposition] (Dec. 13, 2015) at 8 (ADAMS Accession No. ML15347A002). Further, CASE asked that if the Board did not find the Staff’s EA adequate, that

the Board use its considerable authority to require strong, effective and, if merited, ground breaking, measures to correct, reverse and stop the impact of the operation of Turkey Points Units 3 and 4 and of the CCS on the Turkey Point Wetlands to the detriment of the land and CASE members, no matter how far reaching they might have to be.

Id. at 15. CASE did not provide any expert testimony or affidavits disputing any of the facts in FPL's motion.

3.28 On December 21, 2015, the Staff filed an answer in support of FPL's motion for summary disposition. NRC Staff Answer to [FPL's] Motion to Dismiss CASE Contention 1 or, in the Alternative, for Summary Disposition (Dec. 21, 2015) (ADAMS Accession No. ML15355A169) ("Staff Answer to Motion to Dismiss Contention 1 or Summary Disposition"). The Staff argued that FPL's Motion should be granted because FPL has demonstrated that Contention 1 should be dismissed or in the alternative that there is no genuine issue as to any material fact and that FPL is entitled to judgment as a matter of law. *Id.* at 1-2.

3.29 The Staff also filed a response to FPL's statement of material facts. Staff Response to FPL's Statement of Material Facts (Dec. 21, 2015) (ADAMS Accession No. ML15355A170). The Staff's response was that each of FPL's statements of material facts should be admitted. *Id.*⁹

3.30 The Staff's answer to FPL's Motion noted that "[a] party opposing a motion for summary disposition cannot rely on mere allegations or denials of the moving party's facts; rather, the non-moving party must set forth specific facts demonstrating a genuine issue of material fact." Staff Answer to Motion to Dismiss Contention 1 or Summary Disposition at 4 (citing 10 C.F.R. § 2.710(b); *Advanced Medical Sys.*, (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993)). Further, the Staff's Answer noted that while the burden is on the moving party to show there is no genuine issue of material fact, "the non-moving party must controvert any material fact proffered by the moving party or that fact will be *deemed admitted.*" Staff Answer to Motion to Dismiss Contention 1 or Summary Disposition at 4-5 (emphasis in original) (citing *Advanced Medical Sys.*, CLI-93-22, 38 NRC at 102-03).

⁹ For fact 21, the Staff responded that FPL's statement should be admitted and further explained that the water utilized from L-31 E canal would first reach Biscayne Bay, prior to reaching the ocean if it was not diverted to the CCS.

3.31 On December 22, 2015, the Board denied FPL's Motion for Summary Disposition. Order (Denying Application for Subpoenas, Denying Motion for Summary Disposition, and Granting in Part and Denying in Part Motions to Strike) at 1-2 (Dec. 22, 2015). The Board concluded that CASE had submitted sufficient evidence to satisfy its burden of going forward and that the Board's resources would be best served by reviewing the evidence more thoroughly at a hearing. *Id.* at 5.

F. Hearing and Requests for Briefing on Additional Legal Issues

3.32 The hearing on Contention 1 was held on January 11 – 12, 2016, in Homestead, Florida. At hearing, the Board asked the parties to brief two legal issues not raised by Contention 1 or CASE: segmentation and reliance on State actions in complying with NEPA. (Tr. at 553, 556). The Board provided two specific cases for the parties to consult in addressing the reliance on State actions issue: (1) *State of Idaho By & Through Idaho Pub. Utilities Comm'n v. I.C.C.*, 35 F.3d 585, 595-96 (D.C. Cir. 1994); and (2) *Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n*, 449 F.2d 1109, 1123 (D.C. Cir. 1971). (Tr. at 553, 563).

3.33 After the hearing, the Board requested briefing on an additional legal matter. In particular, the Board requested that the parties' findings of fact address the legal effect of a non-binding and non-final recommended order from an administrative judge issued on February 15, 2016, in the proceeding regarding the State's administrative order ("Administrative Order") that directed FPL to implement a salinity management plan and abate the migration of hypersaline water out of the CCS. [FPL's] Second Notice to the Board Regarding State Administrative Proceeding (Feb. 17, 2016) (ADAMS Accession No. ML16048A546); Order (Taking Official Notice and Ordering Briefing) (unpublished) at 1 (Feb. 26, 2016).

3.34 FPL objected to the Board taking official notice of the recommended order to the extent that it would be relied upon as "a final order with independent legal significance and to the extent it reflects factual and legal conclusions." [FPL's] Motion to Controvert Officially Noticed Recommended Order at 6-7 (Mar. 7, 2016) (ADAMS Accession No. ML16067A370).

The Staff acknowledged that the existence of the recommended order was beyond reasonable dispute, but argued that the Board may not use the recommended order “for official notice of the truth of the facts recited therein.” NRC Staff’s Motion in Response to the Board’s Order (Taking Official Notice and Ordering Briefing) at 5 (Mar. 7, 2016) (ADAMS Accession No. ML16067A271). The Staff requested that the Board clarify the scope of its order taking official notice of the State’s recommended order. *Id.* at 1.

3.35 On March 10, 2016, the Board clarified the scope of its order taking official notice. Order (Clarifying Scope of Official Notice) (unpublished) at 2 (Mar. 10, 2016). The Board clarified that

we are not accepting the truth of the facts set forth in the February 15 State Order, nor of the correctness of the order’s legal conclusions. However, the fact that a Florida administrative law judge reached the findings of fact and conclusions of law contained within the recommended order is beyond reasonable dispute and therefore subject to official notice.

Id. The Board specified that the parties were to address in their legal analysis sections whether the mitigation measures at issue are actually mandated by the State, and the legal basis for that conclusion, as well as why a party’s legal assumptions underlying their testimony or the UHS EA’s conclusions remain valid in light of the recommended order. *Id.* at 3-4. On March 11, 2016, the Board further clarified that a March 7, 2016, report by Miami-Dade County alleging that the Turkey Point CCS may be contributing to an increase in tritium levels in Biscayne Bay was not within the scope of Contention 1, and therefore, should not be addressed in the parties’ proposed findings of fact and conclusions of law. Order (Clarifying Scope of Proposed Findings of Fact and Conclusions of Law and Amending Initial Scheduling Order) (unpublished) at 1-2 (Mar. 11, 2016) (emphasis in original).¹⁰

¹⁰ The Board indicated that the report could only come before them as a new contention.

IV. LEGAL STANDARDS

A. National Environmental Policy Act

4.1 Contention 1 challenges the EA prepared by the Staff pursuant to the National Environmental Policy Act of 1969 (“NEPA”), 42 U.S.C. § 4321 et seq., and the NRC’s regulations implementing this statute. NEPA requires the NRC to consider the environmental impacts of its licensing actions prior to issuing licenses. See, e.g., *Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council*, 462 U.S. 87, 97 (1983).

4.2 NEPA is procedural and does not mandate a specific outcome or action. *Winter v. Nat. Res. Def. Council*, 555 U.S. 7, 23 (2008). NEPA only requires that the agency take a “hard look” at the environmental impacts of a proposed action. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332 (1989). NEPA’s procedural requirements are intended to foster informed decision-making and provide public disclosure of the relevant impacts. See *id.* at 332, 349-51.

4.3 The Commission has explained that the requisite “hard look” mandated by NEPA¹¹ is subject to a “rule of reason.” *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 48 (1978). The Staff’s assessment need not include every environmental effect that could potentially result from the action, but rather “may be limited to effects which are shown to have some likelihood of occurring.” *Id.* at 41, 48.

4.4 Further, NEPA does not call for a “worst-case” inquiry, as such an inquiry “creates a distorted picture of a project’s impacts and wastes agency resources.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 354-55 (1989); *Private Fuel Storage, L.L.C* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 351 (2002). NEPA gives agencies “broad discretion to keep their inquiries within appropriate and manageable boundaries.” *Louisiana Energy Servs., L.P.*, CLI-98-3, 47 NRC at 103 (citation omitted). Thus, the proper

¹¹ See *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-8 (1998).

inquiry under this standard is not whether an effect is “theoretically possible,” but rather whether it is “reasonably probable that situation will obtain.” *Prairie Island*, ALAB-445, 7 NRC at 49. (Ex. NRC-049 at 9).

4.5 “NEPA does not require the NRC to create information that does not currently exist or impose mitigation measures.” *Turkey Point*, CLI-15-25 at slip op. 9-10 n. 46. “Rather, NEPA imposes upon the NRC a disclosure obligation—that the NRC publicly discuss its evaluation of *the reasonably foreseeable effects of a proposed action*.” *Id.* (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 350-53; *Town of Winthrop v. FAA*, 535 F.3d 1, 11-13 (1st Cir. 2008); *Lee v. U.S. Air Force*, 354 F.3d 1229, 1244 (10th Cir. 2004) (emphasis added)). An agency need not have complete information on all issues before proceeding. *Public Serv. Co. of Oklahoma* (Black Fox Station, Units 1 & 2), LBP-78-26, 8 NRC 102, 141 (1978), *vacated*, LBP-83-10, 17 NRC 410 (1983). Moreover, NEPA does not require “virtually infinite study and resources,” use of the best scientific methodology,¹² or preparation of “a research document.”¹³

B. NRC’s Regulations and Guidance on EAs

4.6 The NRC’s regulations implementing NEPA are in 10 C.F.R. Part 51.¹⁴ If a licensing action is not listed as requiring an EIS per 10 C.F.R. § 51.20 or within the categorical exclusions established at 10 C.F.R. § 51.22, the Staff prepares an EA. 10 C.F.R. § 51.21. (Ex. NRC-001 at 33; NRC-049 at 7). In accordance with 10 C.F.R. § 51.22(b), the Staff may elect to prepare an EIS or EA for actions that meet the criteria for a categorical exclusion if special

¹² *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 315 (2010) (citing *Hells Canyon Alliance v. U.S. Forest Serv.*, 227 F.3d 1170, 1185 (9th Cir. 2000); *Natural Resources Defense Council v. Hodel*, 865 F.2d 288, 294 (D.C. Cir. 1988)) (internal quotation omitted).

¹³ *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 208 (2010) (citing *Town of Winthrop v. FAA*, 533 F.3d at 13).

¹⁴ 10 C.F.R. Part 51, Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions.

circumstances exist. Special circumstances may include the potential for adverse effects on a property included in or eligible for the National Park Service's *National Register of Historic Places*; on minority and/or low-income populations; or on federally listed species or designated critical habitat. (Ex. NRC-028 at B-8 – B-14. Ex. NRC-001 at 35).

4.7 In determining what environmental analysis to perform, the Staff follows the NRC's regulations and is also guided by NRR Office Instruction LIC-203, Rev. 3, "Procedural Guidance for Preparing Categorical Exclusions, Environmental Assessments, and Considering Environmental Issues" (June 24, 2013) (ADAMS Accession No. ML12234A708). (Ex. NRC-028; Ex. NRC-001 at 34).¹⁵

4.8 Unlike an EIS, which is subject to a number of specified regulatory requirements,¹⁶ there is no "universal formula for what an EA must contain and consider." *Friends of Congaree Swamp v. Fed. Highway Admin.*, 786 F. Supp. 2d 1054, 1062 (D.S.C. 2011). An EA requires less depth of consideration and less detail than an EIS.¹⁷

4.9 An EA documents the Staff's determination of whether the action is a major federal action that requires preparation of an EIS. The EA also includes a brief discussion of the need for the proposed action, alternatives to the proposed action, the environmental impacts of the proposed action and alternatives, a list of agencies and persons consulted, and identification of sources used to prepare the EA. See 10 C.F.R. § 51.30. (Ex. NRC-001 at 37; NRC-049 at 8).

4.10 Thus, an EA is a short concise document that briefly provides sufficient evidence and analysis for determining whether to prepare an EIS; aids an agency's compliance with

¹⁵ *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-15-6, 81 NRC 340, 358-59 and n.85 (2015) (noting that Staff guidance documents do not have the force of law, but are entitled to special weight).

¹⁶ See, e.g., 10 C.F.R. §§ 51.70 and 51.71 (draft EIS), 10 C.F.R. §§ 51.90 and 51.91 (final EIS), 40 C.F.R. §§ 1502.15 and 1502.16 (all EISs).

¹⁷ See *Pa'ina Hawaii, LLC* (Materials License Application), CLI-10-18, 72 NRC 56, 75 (2010).

NEPA when no EIS is necessary; and facilitates preparation of an EIS when one is necessary.

See *Pacific Gas & Elec. Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509, 514 and n.27 (2008); 10 C.F.R. § 51.14.

4.11 If the Staff determines on the basis of the EA that the action will not have a significant impact on the environment, the Staff prepares a FONSI. See 10 C.F.R. § 51.23. (Ex. NRC-001 at 33-34; NRC-049 at 8). A FONSI is:

a concise public document for which the Commission is responsible that briefly states the reasons why an action, not otherwise excluded, will not have a significant effect on the human environment and for which therefore an [EIS] will not be prepared.

10 C.F.R. § 51.14(a). (Ex. NRC-049 at 8-9).

4.12 A FONSI must be prepared and published in accordance with the requirements in 10 C.F.R. §§ 51.32, 51.34, 51.35, and 51.119. A FONSI includes the EA or a summary of the EA. If the assessment is included, the finding does not need to repeat the discussion in the assessment; it may incorporate it by reference. 10 C.F.R. § 51.32(a)(4).

C. ASLBP Review of Staff NEPA Analysis

4.13 NRC adjudicatory hearings are not “EIS editing sessions.” *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 431 (2003). Neither is the Commission appeals process. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-4, 59 NRC 31, 41 (2004). NRC hearings are not intended to fine-tune, add details or nuances, or edit Staff NEPA documents to meet an intervenor’s preferred language or emphasis.¹⁸

¹⁸ *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 811 (2005) (boards “do not sit to ‘flyspeck’ environmental documents or to add details or nuances.”); see also *System Energy Res., Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 19 (2005) (internal citations omitted) (editing Staff NEPA documents to meet an intervenor’s preferred language or emphasis “is not a function of [the NRC] hearing process,” and “boards do not sit to parse and fine-tune” the staff’s NEPA documents).

4.14 A licensing board may look beyond the face of the Staff's NEPA document and examine the entire administrative record to determine whether "the Staff's underlying review was sufficiently detailed to qualify as 'reasonable' and a 'hard look' under NEPA — even if the Staff's description of that review in the [NEPA document] was not."¹⁹ Thus, "even if an [environmental review document] prepared by the Staff is found to be inadequate in certain respects, the Board's findings, as well as the adjudicatory record, 'become, in effect, part of the [environmental review document].'"²⁰ This applies whether the document is an EIS or an EA, and regardless of the type of hearing procedures involved.²¹

4.15 Generally, an applicant has the burden of proof in a licensing proceeding. 10 C.F.R. § 2.325. In cases involving NEPA-based contentions, however, the burden is on the Staff, because the Staff, not the Applicant, has the statutory obligation of complying with NEPA. *See, e.g., Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), CLI-83-19, 17 NRC 1041, 1049 (1983). According to the Commission, "NRC hearings on NEPA issues focus entirely on the adequacy of the NRC Staff's work." *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-07-17, 65 NRC 392, 395 (2007). Contention 1 challenges the EA prepared by the Staff and questions whether the NRC Staff has satisfied its responsibilities under NEPA. Thus, the Staff bears the burden of proof for this contention. *See, e.g., Progress Energy Florida, INC.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 34 (2010).

¹⁹ *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 230 (2007).

²⁰ *Strata Energy, Inc.* (Ross In Situ Recovery Project), LBP-15-3, 81 NRC 65, 82 (2015) (citations omitted); *see also Diablo Canyon*, CLI-08-26, 68 NRC at 526 ("Consistent with longstanding NRC practice," an NRC adjudicatory decision "becomes part of the environmental record of decision along with the environmental assessment itself.").

²¹ *Pa'ina Hawaii, L.L.C.*, Initial Decision (Ruling on Concerned Citizens of Honolulu Amended Environmental Contentions #3, #4, and #5) at 16-18 (Aug. 27, 2009) (unpublished) (ADAMS Accession No. ML092390386), *aff'd in part and rev'd in part on other grounds*, *Pa'ina Hawaii, L.L.C.*, CLI-10-18, 72 NRC 56 (2010).

4.16 However, because “the Staff, as a practical matter, relies heavily upon the Applicant’s [license application] in preparing the [environmental review document], should the Applicant become a proponent of a particular challenged position set forth in the [environmental review document], the Applicant, as such a proponent, also has the burden on that matter.” *Strata*, LBP-15-3, 81 NRC at 85 (quoting *Louisiana Energy Servs., L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 339 (1996), *rev’d on other grounds*, *Louisiana Energy Servs., L.P.* (Claiborne Enrichment Center) CLI-97-15, 46 NRC 294 (1997)).

4.17 In challenging the Staff’s EA, CASE must identify, with some specificity, the alleged deficiencies in the Staff’s NEPA analysis. See *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 13 (1999). Moreover, “a party sponsoring a contention bears the burden of going forward with evidence sufficient to show that there is a material issue of fact or law, such that the applicant/proponent must meet its burden of proof.” Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2213 (Jan. 14, 2004) (Final rule). As the Commission has stated:

The ultimate burden of proof on the question of whether the permit or license should be issued is . . . upon the applicant. But where . . . one of the other parties contends that, for a specific reason . . . the permit or license should be denied, that party has the *burden of going forward* with evidence to buttress that contention. Once he has introduced sufficient evidence to establish a *prima facie* case, the burden then shifts to the applicant who, as part of his overall burden of proof, must provide a sufficient rebuttal to satisfy the Board that it should reject the contention as a basis for denial of the permit or license.²²

4.18 The Commission has emphasized that the Staff’s NEPA analysis is adequate unless the Staff “has unduly ignored or minimized pertinent environmental effects.” See *McGuire*, CLI-03-17, 58 NRC at 431. It is intervenors’ burden to show the significance and materiality of a mistake in the Staff’s environmental review document.²³

²² *Amergen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 269 (2009), quoting *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-123, 6 AEC 331, 345 (1973).

²³ *Clinton ESP*, CLI-05-29, 62 NRC at 811.

4.19 Finally, the standard of proof in this proceeding is preponderance of the evidence.²⁴ Because NEPA does not require certainty or precision or the use of best methodology, the Staff need not prove, and this Board need not find, that its results are the most accurate or were performed with the best methodology.²⁵

V. FINDINGS OF FACT

A. Witnesses Presented

5.1 The evidentiary hearing on this contention was held on Monday, January 11, 2016, and Tuesday, January 12, 2016. A total of 8 witnesses appeared on behalf of FPL, the Staff, and CASE, as set forth below. Pre-filed testimony was submitted by each of the witnesses. All of the witnesses also provided oral testimony in response to questioning by the Board.

5.2 FPL presented a panel of 3 witnesses in support of Contention 1. They were (1) Steve Scroggs, (2) Jim Bolleter, and (3) Pete Andersen.

5.3 FPL's witness Steve Scroggs is employed as Senior Director, Project Development and is responsible for undertaking development and management roles related to project development. (Ex. FPL-001 at 1). In 2014, Mr. Scroggs was assigned to oversee and direct the efforts to reduce salinity in the Turkey Point CCS. *Id.*

5.4 Mr. Scroggs has a Bachelor of Science degree in Mechanical Engineering from the University of Missouri – Columbia and a certification as a nuclear engineering officer and submarine officer. (Ex. FPL-001 at 1-2). Mr. Scroggs also has a Master of Science Degree in Mechanical Engineering from Pennsylvania State University. Mr. Scroggs is involved in the long

²⁴ See *Pacific Gas & Elec. Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509, 521 (2008) (applying a preponderance of the evidence standard to resolution of an environmental contention).

²⁵ See *Louisiana Energy Services* (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005) (stating that NEPA does not require certainty or precision); *Pilgrim*, CLI-10-11, 71 NRC at 315 (stating that NEPA does not require use of the best methodology).

range generation planning efforts for FPL, including the oversight of Requests for Proposals for Turkey Point Unit 5 and West County Energy Center Units 1 and 2. (Ex. FPL-001 at 2). Mr. Scroggs also leads the multi-disciplinary team responsible for licenses, certifications, and approvals necessary to construct and operate the Turkey Point Units 6 & 7 Project. *Id.*

5.5 Mr. Scroggs' testimony addresses the issues raised in CASE's Contention 1, with particular focus on FPL's efforts to mitigate salinity and otherwise manage the cooling canals. (Ex. FPL-001 at 2). Mr. Scroggs is familiar with the UHS LAR, the Staff's review documents (including the EA), and with FPL's other permit applications to state of Florida regulators. (*Id.* at 3).

5.6 FPL witness Jim Bolleter is employed by Ecology and Environmental, Inc. ("E&E") as Operations Manager. (*Id.*). Mr. Bolleter has a Bachelor of Science in Ocean Engineering from Texas A&M University and a Master of Science Degree in Civil Engineering from Texas A&M. *Id.* While in school Mr. Bolleter worked on the Strategic Petroleum Reserve Project, tracking a salt water plume from brine disposal in the Gulf of Mexico. (*Id.*). Mr. Bolleter worked for Baskerville Donovan, an engineering firm, for eight years and has been with E&E since 1993. (*Id.*).

5.7 Mr. Bolleter is a registered professional engineer in Florida and nine other states and Puerto Rico. (*Id.* at 3-4). As operations manager of E&E's West Palm Beach office, Mr. Bolleter leads and manages environmental scientists, engineers, and planners. Mr. Bolleter has over 30 years of experience in a wide variety of environmental, coastal, and water resource projects, including environmental impact assessment, water quality and wetland restoration, and environmental monitoring. (*Id.* at 4). Mr. Bolleter has also managed multiple multidisciplinary environmental projects and numerous projects in the water resource, ecosystem restoration, power, alternative energy, oil and gas, hazardous waste, and land development market sectors. (*Id.*).

5.8 Mr. Bolleter currently oversees the Uprate Monitoring Program for FPL. Mr. Bolleter's testimony addresses the issues raised in CASE's Contention 1 regarding the impact of the UHS license amendment, specifically with respect to saltwater intrusion and the findings of FPL's Uprate Monitoring Program, which tracks saltwater intrusion in the vicinity of the cooling canals. (*Id.* at 4).

5.9 FPL witness Peter Andersen is employed by Tetra Tech, Inc., an environmental consulting firm. (*Id.* at 5). Mr. Andersen is a Principal Engineer and Operations Manager at the Alpharetta, GA office. (*Id.*). Mr. Anderson has a Bachelors of Civil Engineering (BCE) degree from Auburn University and a Master of Science Degree in Civil Engineering from Auburn University.

5.10 Mr. Andersen has been involved as a consultant to FPL for approximately 11 years, with much of that work involving the Turkey Point Plant. (*Id.* at 8). Mr. Andersen's specific areas of expertise are in groundwater hydrology, water resource engineering, groundwater modeling, and groundwater/surface water relationships. (*Id.*).

5.11 Mr. Andersen performed the groundwater modeling of the proposed extraction of 14 million gallons per day ("MGD") of Floridan Aquifer water for cooling purposes for the Site Certification of Unit 5. Mr. Andersen was qualified as an expert and testified in the administrative hearing. Mr. Andersen became involved in the Site Certification Application and Combined License ("COLA") applications for Units 6 and 7 in 2008. *Id.* Mr. Andersen's role was to assist and review the groundwater modeling being performed by the prime contractor. *Id.* Mr. Andersen performed independent analyses and offered suggestions on groundwater modeling techniques. *Id.*

5.12 Mr. Andersen has been active in assisting FPL in the state and federal review processes and testified in the Site Certification Application hearing. *Id.* Mr. Andersen also managed a project that involved developing a comprehensive water and salt balance of the

CCS. This balance used data from the Uprate Monitoring Program and quantified inflows to and outflows from the CCS. (Ex. FPL-001 at 8).

5.13 Mr. Andersen's testimony addresses the issues raised in CASE's Contention 1 regarding the impact of the UHS license amendment, specifically with respect to the impact on temperature and the impact of the license amendment on salinity in the CCS, the quality of the water FPL is using and plans to use to mitigate CCS conditions, and the impact of both of these measures on saltwater intrusion. (*Id.* at 8-9).

5.14 Based on their demonstrated knowledge, skill, experience, and education, we find that FPL's witnesses, Mr. Scroggs, Mr. Bolleter, and Mr. Andersen, are qualified to serve as experts.

5.15 The Staff presented a panel of four witnesses concerning the contention. The witnesses were: (1) Audrey L. Klett, (2) Briana A. Grange, (3) William Ford, and (4) Nicholas P. Hobbs.

5.16 Ms. Klett is the project manager for Turkey Point Units 3 and 4 within the Division of Operating Reactor Licensing ("DORL"), Office of Nuclear Reactor Regulation ("NRR"). (Ex. NRC-001 at 1-6; NRC-049 at 10). Ms. Klett has the primary responsibility for interfacing with FPL regarding plant operations, license amendments, and certain inspections, among other things. (Ex. NRC-001 at 1-6; NRC-049 at 10). Ms. Klett has a Bachelor of Science in Electrical Engineering from the University of Illinois at Urbana-Champaign. (Ex. NRC-002 at 1).

5.17 Ms. Klett has been a project manager with DORL for over two years and reviewed numerous license amendments. (Ex. NRC-001 at 1-6; NRC-049 at 10). Ms. Klett has been employed in various capacities by the NRC with responsibilities to review licensee actions and requests for over 12 years. (Ex. NRC-001 at 1-6; NRC-049 at 10).

5.18 Ms. Klett's testimony primarily addresses the challenged UHS license amendments and the Staff's process for evaluating the LAR and preparing the environmental analysis. (Ex. NRC-001 at 1-6; NRC-049 at 10).

5.19 Ms. Briana Grange is an Environmental Scientist with the Environmental Review and Guidance Branch, Division of License Renewal, NRR. (Ex. NRC-001 at 1-6; NRC-049 at 10). Ms. Grange has a Bachelor of Science in Conservation Biology from the University of Maryland (Ex. NRC-003 at 1).

5.20 Ms. Grange has extensive experience conducting environmental reviews including providing major contributions to over half of the EISs for license renewal and over two dozen EAs, including previous EAs for Turkey Point Units 3 and 4. (Ex. NRC-001 at 1-6; NRC-049 at 10). Ms. Grange has been conducting environmental analyses for the NRC for over 9 years. (Ex. NRC-001 at 1-6; NRC-049 at 10).

5.21 Ms. Grange has provided environmental expertise for power plant licensing actions in the areas of: terrestrial ecology, aquatic ecology, federally endangered and threatened species and critical habitats, essential fish habitat, land use, visual resources, and microbiological hazards. (Ex. NRC-003 at 1). Ms. Grange has performed environmental or technical reviews for 24 reactor licensing actions, including reviews for extended power uprates, stretch power uprates, ultimate heat sink license amendments, environmental protection plan modifications, and fuel burnup limit modifications. (*Id.*).

5.22 Ms. Grange maintains the NRC's records on ESA section 7 consultations and monitoring incidental takes at all operating nuclear power plants with biological opinions issued by the U.S. Fish and Wildlife (FWS) or National Marine Fisheries (NMFS). Ms. Grange also ensures that the NRC complies with the terms and conditions of applicable biological opinions and that the NRC reinitiates consultation in a timely manner with FWS or NMFS in the event that an incidental take limit at a nuclear power plant is exceeded. *Id.*

5.23 Specific to Turkey Point Nuclear Generating, Units 3 and 4, Ms. Grange served as an environmental reviewer for the 2012 license amendment granting an EPU, the 2014 amendment and exemption to 10 CFR 50.46 and Appendix K to 10 CFR Part 50 regarding the use of Optimized ZIRLO™ clad fuel rods, and the 2014 exigent amendment that increased the

allowable UHS inlet temperature limit. Ms. Grange prepared biological assessments and conducted ESA Section 7 consultations with the FWS in support of both the 2012 EPU amendment and the 2014 UHS amendment. (Ex. NRC-003 at 2).

5.24 Ms. Grange's testimony generally addresses the challenged EA, the Staff's conclusions, and the information supporting those conclusions. (Ex. NRC-001 at 1-6; NRC-049 at 10). Ms. Grange also discusses the Staff's consultation with FWS and communications with various State officials. (Ex. NRC-001 at 1-6; NRC-049 at 10).

5.25 Mr. Ford is a Senior Physical Scientist with Environmental Review and Guidance Branch, Division of License Renewal, NRR. *Id.* Mr. Ford is a professional geologist with the State of Florida. (Ex. NRC-004 at 1). Mr. Ford has a Bachelor of Arts in Geology and a Master of Science in Geology. *Id.*

5.26 Mr. Ford has extensive experience examining hydrology as part of initial licensing, license renewal, and license amendments for a range of applications including reactors and uranium recovery facilities. (Ex. NRC-001 at 1-6; NRC-049 at 10). Mr. Ford has been conducting environmental analyses for the NRC for 31 years, and has over 44 years of experience with environmental and hydrology analyses overall.

5.27 Mr. Ford's experience includes groundwater radiological and nonradiological effluent releases, well drilling, well testing, water quality sampling, groundwater modeling and data analysis, geochemical studies, the collection of surface water flow data and analysis, and soil studies. (Ex. NRC-004). Mr. Ford has conducted hydrologic studies at numerous nuclear power reactor sites, other NRC licensed facilities, and other commercial operations. Since 2011, Mr. Ford has been solely focused on geologic, groundwater, and surface water investigations at NRC licensed nuclear reactors. (Ex. NRC-004 at 1).

5.28 Mr. Ford's testimony generally addresses CASE's assertions regarding the supposed impact of saltwater intrusion from the proposed 4° F change to the UHS inlet temperature. (Ex. NRC-001 at 1-6; NRC-049 at 10-11). He also addresses CASE's claims

regarding the hydrology underlying Turkey Point Units 3 and 4. (Ex. NRC-001 at 1-6; NRC-049 at 11).

5.29 Mr. Hobbs is currently a Reactor Systems Engineer with the Balance-of-Plant Branch, Division of Safety Systems, NRR. (Ex. NRC-001 at 1-6; NRC-049 at 11). Mr. Hobbs has a Bachelor of Science in Nuclear and Radiological Engineering from the Georgia Institute of Technology and a Master of Science in Nuclear Engineering from the Georgia Institute of Technology. (Ex. NRC-005 at 1).

5.30 Mr. Hobbs has extensive experience with thermal hydraulic modeling and parts of advanced reactor design. (Ex. NRC-001 at 1-6; NRC-049 at 11). Mr. Hobbs' testimony generally addresses the expected performance and characteristics of the CCS and various actual and hypothetical operating conditions. *Id.*

5.31 Based on their demonstrated knowledge, skill, experience, we find that the Staff's witnesses, Ms. Klett, Ms. Grange, Mr. Ford, and Mr. Hobbs, are qualified to serve as experts.

5.32 CASE presented one witness concerning the contention, Dr. Phillip K. Stoddard. Dr. Stoddard is a professor in the Department of Biological Sciences at Florida International University. (Ex. INT-076 at 4). Dr. Stoddard has a Ph.D. in Psychology with a focus in animal behavior and physiology. (Ex. INT-076 at 4). Dr. Stoddard identified himself as a biologist (Ex. INT-076 at 11).

5.33 Dr. Stoddard indicated that he had read the Staff's UHS EA and FONSI. (Ex. INT-076 at 5). Based on his reading, Dr. Stoddard testified that the NRC's EA and FONSI "misses several effects of allowing an increase in the peak temperature of the [CCS] from 100° to 104°F." (*Id.* at 6). Dr. Stoddard's testimony focused on the supposed impacts of the UHS amendments on the crocodiles, fish, and invertebrates residing in the canals. (*Id.* at 4-11).

5.34 CASE's Contention 1 is a NEPA contention challenging the sufficiency of the Staff's EA with respect to the potential impacts associated with the migration of salinity out of the CCS as a result of the UHS license amendments. Neither CASE nor Dr. Stoddard provided any

evidence that Dr. Stoddard had any demonstrated experience in conducting NEPA reviews, the NRC's NEPA review process, or the contents of environmental assessments associated with license amendment actions. We therefore afford no weight to Dr. Stoddard's testimony on issues related to NRC's NEPA requirements or NEPA reviews because he has not demonstrated sufficient qualifications to support an expert opinion on these issues. An expert opinion is only admissible if the witness is competent to give an expert opinion and adequately states and explains the factual basis for the expert opinion.²⁶ Parties bear the burden of demonstrating the expert qualifications of their witnesses, which they do by pointing to relevant "knowledge, skill, experience, training, or education."²⁷

5.35 During his testimony, Dr. Stoddard was unable to point to any particular evidence that gave the Board some view as to hypersaline migration outside the canals and its impact on the environment. (Tr. 304, line 6-25 through Tr. 308, line 4). Therefore, we give little weight to Dr. Stoddard's testimony.

5.36 Dr. Stoddard may be qualified to serve as an expert with respect to potential impacts on crocodiles. However, such matters are outside the scope of Contention 1 as admitted.

B. The Staff's Environmental Assessment Is Adequate Under NEPA

5.37 We find that the Staff prepared the UHS EA consistent with the requirements of NEPA, 10 C.F.R. Part 51, and NRC guidance. For the reasons stated below, we resolve Contention 1 in favor of the Staff and FPL.

5.38 Contention 1, as admitted, reads as follows:

The NRC's environmental assessment, in support of its finding of no significant impact related to the 2014 Turkey Point Units 3 and 4 license amendments, does

²⁶ *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-4, 61 NRC 71, 81 (2005).

²⁷ *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-21, 60 NRC 21, 27-28 (2004) (internal quotations omitted).

not adequately address the impact of increased temperature and salinity in the CCS on saltwater intrusion arising from (1) migration out of the CCS; and (2) the withdrawal of fresh water from surrounding aquifers to mitigate conditions within the CCS.

Turkey Point, LBP-15-13, 81 NRC at 476.

5.39 In support of its two primary claims, CASE argues that the conditions in the CCS have changed since the 2012 EPU and that the UHS EA did not adequately discuss current and reasonably foreseeable environmental conditions. *Turkey Point*, LBP-15-13, 81 NRC at 471; *Turkey Point*, CLI-15-25, 82 NRC at _ (slip op. at 15).

5.40 We first address the undisputed facts from FPL's motion for summary disposition. We next address CASE's underlying claim that the Staff did not provide an adequate baseline of conditions from which to consider the amendments' impacts in the UHS EA. We then address in turn the two prongs of Contention 1, as admitted.

1. CASE Failed to Dispute the Facts In FPL's Motion for Summary Disposition

5.41 In support of its motion for summary disposition, FPL submitted a list of undisputed facts (see Table below). The Staff affirmed these facts and CASE did not offer any expert testimony or affidavits disputing these facts. Therefore, these facts are deemed admitted. See *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 308, 313-315 (2010) (excluding portions of remanded contention from further litigation due to intervenor's failure to support with probative evidence opposing summary disposition):

FACT #	FACT
1.	On July 10, 2014 FPL sought a license amendment to amend the Technical Specifications for Turkey Point. The amendment would increase the ultimate heat sink temperature limit from 100° to 104°F.
2.	In addition to its safety evaluation, the NRC Staff prepared a Biological Assessment and an Environmental Assessment.
3.	The NRC's Environmental Assessment concluded with a formal Finding of No Significant Impact for the license amendment.

4.	The NRC's Environmental Assessment noted that temperature increases associated with the amendment would increase water evaporation rates and result in higher salinity levels in the cooling system, but that this effect would be temporary and short in duration because salinity would again decrease upon natural freshwater recharge of the system, and concluded that the ultimate heat sink license amendment would not have a significant impact on groundwater resources and aquatic resources.
5.	The NRC issued the license amendment on August 8, 2014.
6.	The ultimate heat sink ("UHS") license amendment has not resulted in a significant increase in temperature in the Cooling Canal System ("CCS").
7.	The ultimate heat sink license amendment has not resulted in a significant increase in salinity in the CCS.
8.	The UHS license amendment has not resulted in a noticeable effect in the surrounding aquifers.
9.	The UHS license amendment will not cause FPL to withdraw additional water from local sources.
10.	FPL has withdrawn water from the Upper Floridan Aquifer to mitigate conditions in the CCS.
11.	The Florida Department of Environmental Protection has issued an Administrative Order requiring FPL to develop a salinity management plan to reduce salinity in the CCS to 34 psu (approximately that of seawater) within 4 years.
12.	FPL plans to comply with the Administrative Order by constructing and operating new wells in the Upper Floridan Aquifer to add up to 14 million gallons per day of water into the CCS.
13.	The Upper Floridan Aquifer contains brackish water in the vicinity of Turkey Point.
14.	The Floridan Aquifer is separated from the Biscayne Aquifer and there is little if any interaction between the two.
15.	FPL's withdrawal of water from the Floridan Aquifer will not result in an increase in saltwater intrusion.
16.	FPL has withdrawn water from the Biscayne Aquifer for CCS mitigation, using wells drilled on the Turkey Point peninsula.
17.	The Biscayne Aquifer contains saltwater in the vicinity of Turkey Point.

18.	Saltwater has been documented in the Biscayne Aquifer well inland of Turkey Point since before the construction of the CCS.
19.	FPL's withdrawal of water from the Biscayne Aquifer will not result in an increase in saltwater intrusion.
20.	FPL has directed excess storm water from the L-31 E canal to the CCS for CCS mitigation.
21.	The water FPL has utilized from the L-31 E canal would be discharged to the ocean if it were not diverted to the CCS.
22.	FPL's withdrawal of water from the L-31 E canal will not result in an increase in saltwater intrusion.

2. The EA Accounted for the Past and Current Groundwater Conditions of the CCS

5.42 CASE asserts that the UHS EA did not consider what was happening in the CCS at the time of the amendments. CASE's Petition at 9; Rebuttal SOP at 23. Further, CASE asserts that the Staff did not consider that the EPU was likely the underlying reason the CCS was unusually hot and hypersaline at the time of the UHS EA. *Id.* Therefore, CASE appears to assert that the UHS EA did not contain a sufficient discussion of the current baseline environmental conditions and the reasonably foreseeable environmental impacts of increased temperature and salinity in the CCS on saltwater intrusion arising from migration out of the system. *Turkey Point*, CLI-15-25, 82 NRC at __ (slip op. at 23).

5.43 The Staff explained at hearing that the analyses incorporated into the "Plant Site and Environs" section of the UHS EA were used to assess baseline groundwater conditions at Turkey Point. (Tr. at 517-518). CASE does not dispute the Staff's use of incorporation by reference. And this proceeding is not "revisiting the issuance of previous environmental analyses for Turkey Point (including the [EPU EA])". *Turkey Point*, CLI-15-25, 82 NRC at __ (slip op. at 14).

5.44 The Staff testified that the analyses incorporated into the "Plant Site and Environs" section of the UHS EA provide detailed discussions regarding the impacts of saline CCS water

migrating out of the canal and into groundwater, including impacts on saltwater intrusion. (Tr. at 517-19). Saltwater migration out of the CCS into surrounding groundwater was first identified in the 1972 FES. (Ex. NRC-047 at V-3, Tr. at 518). The FES described the likelihood of increasing temperatures and salinity in the CCS, and the likely migration of water in the CCS into the groundwater. (Ex. NRC-047 at V-3, Tr. at 518). The FES also discussed the use of an interceptor ditch to mitigate the effects of CCS water migrating west of the CCS in the Biscayne Aquifer. FPL and the Staff testified that the freshwater/saltwater interface was several miles west of Turkey Point prior to construction of Units 3 and 4. (Ex. NRC-047 at V-3, Tr. at 518 and 547).

5.45 The 2002 license renewal SEIS also concluded that operation of the CCS would not significantly impact groundwater quality. (Ex. NRC-024 at 2-7, 2-18, Tr. at 519). As Staff explained at hearing, this conclusion was based on the Staff's finding that impacts to groundwater caused by the CCS would not exceed those considered in the 1996 Generic Environmental Impact Statement ("GEIS") for license renewal of all nuclear power reactors in the United States. *Id.*

5.46 The GEIS considered the impacts of 20 years of continued operation of a nuclear power plant (i.e., of renewing a license). The GEIS analyzed impacts to groundwater caused by unlined cooling canals and ponds in saltwater marsh areas. The GEIS specifically named Turkey Point as an example of such a system. See 1996 GEIS at 2-2 to 2-10, Table 2.2 (ADAMS Accession No. ML040690705). The GEIS explained that water in unlined cooling canals has higher concentrations of dissolved solids (i.e., salinity) than underlying groundwater; therefore, saltier canal water seeps from cooling canals into underlying groundwater, which may then spread laterally off-site. *Id.* at 4-121. Consequently, groundwater near the site may approach salinity levels of canal water. *Id.* For canal systems in saltwater marshes, like Turkey Point, the GEIS concluded that impacts to groundwater quality are a Category 1 issue (i.e., an issue with

small impacts to the environment for all plants and therefore not requiring a site-specific analysis for license renewal) because groundwater quality beneath salt marshes is already poor.²⁸

5.47 The Staff testified that the 2012 EPU EA also described the exchange between hypersaline water in the CCS and groundwater. (Tr. 427; NRC-022 at 20,062).

5.48 The 2012 EPU EA also described current and expected changes to the CCS caused by the EPU. In particular, the EPU EA noted that water loss from evaporation would increase the CCS salinity levels of 40 to 60 ppt by 2 to 3 ppt, much higher than local groundwater. (Ex. NRC-022 at 20,063). The EPU EA also stated that the northeast portion of the CCS may increase by 2.0 °F to 2.5 °F under EPU conditions, but that the temperature increase attributable to the EPU would decrease within the CCS as water moves south through the system. *Id.* Like the FES, the 2012 EPU EA discussed the use of the interceptor ditch to mitigate the westward movement of hypersaline CCS water in the groundwater. (*Id.* at 20,062). The EPU EA concluded that these impacts to groundwater were insignificant. (*Id.* at 20,062-63; Tr. at 518).

5.49 The Staff further testified that the UHS EA described conditions in the CCS during 2014 that led to the need for the UHS amendments. (Ex. NRC-001 at 41; Tr. at 333). The EA stated that the CCS had become unusually hot and hypersaline, due to high temperatures, low rainfall, and an algae bloom. (Ex. NRC-009 at 44,466-68).

5.50 CASE does not dispute the Staff's testimony that the analyses incorporated into the UHS EA discuss the impacts of CCS water migration on saltwater intrusion in the Biscayne Aquifer. Moreover, CASE does not dispute that the EPU EA discussed increases in temperature and salinity in the CCS.

²⁸ Turkey Point 3 & 4's licenses were renewed in 2002. Turkey Point Unit 3 entered the period of extended operation on 7/19/2012 and Unit 4 entered the period of extended operation on 4/10/2013. The Turkey Point license renewal application and review was done under the 1996 GEIS. The 2013 GEIS (ADAMS Document Package Accession No. ML13107A023) continues to categorize groundwater as a Category 1 issue. See Table B-1 in 10 C.F.R. Part 51.

5.51 In light of the testimony and exhibits from the Staff, FPL, and CASE, we find that the documents the Staff incorporated into the UHS EA provide a sufficient baseline regarding groundwater conditions at the time the UHS LAR was being considered. We also find that the UHS EA discussed the changes in the CCS from this baseline at the time of the UHS amendments. Specifically, the EA states that the CCS had recently become unusually hot and hypersaline due to the combination of summer temperatures, low rainfall, and the presence of higher than normal algae concentrations. (Ex. NRC-009 at 44,466-68). It is clear based on the previous NEPA analysis incorporated in the UHS EA that the Staff was well aware of the state of the CCS at the time of the amendments and documented that awareness in the UHS EA. Moreover, it is clear that the Staff was cognizant of the historical issues regarding hypersalinity in the CCS and disclosed the references discussing those issues in the UHS EA.

5.52 CASE does not dispute that the UHS EA states that the CCS had become unusually hot and hypersaline during the summer of 2014. Moreover, CASE has not provided an adequate evidentiary basis for us to conclude that its concerns regarding the sufficiency of the EA's consideration of baseline groundwater conditions are well-founded. Consequently, we find the UHS EA contains a sufficient discussion of the current baseline of groundwater conditions from which to conduct its analysis.

3. The Amendments Do Not Significantly Impact Saltwater Intrusion Caused by Migration of Water Out of the CCS

5.53 Having established a sufficient discussion of the baseline of groundwater conditions in the UHS EA, we consider the first prong of Contention 1: whether the Staff's EA sufficiently considered the impact of saltwater intrusion caused by migration of water out of the CCS. The Staff asserts that it properly considered whether the proposed change (i.e., a four degree change in the allowable inlet temperature in the CCS with no physical or operational changes) would have any significant impact on groundwater. (*Id.* at 44,466; NRC-001 at 37; Tr. at 438). The Staff concluded that the amendments would not have any impacts beyond those

considered in the previous environmental documents. (Ex. NRC-009 at 44,466; NRC-001 at 37; Tr. at 438).

5.54 In particular, the Staff found that the amendments would not lead to impacts from the migration of water out of the CCS beyond those discussed in the documents incorporated into the UHS EA because: (1) the amendments would not appreciably increase salinity in the CCS and therefore, not affect groundwater (Ex. NRC-009; NRC-001 at 45); (2) any temperature increases in the CCS would be of short duration and would not affect groundwater (Ex. NRC-009; NRC-001 at 45); and (3) the conditions in the CCS necessitating the amendments were unique and not likely to recur. (Tr. at 422). For the foregoing reasons, we agree.

a. The Staff Reasonably Concluded That the UHS Amendments Would Not Appreciably Increase Salinity in the CCS

5.55 In support of its contention that the UHS amendments will increase the migration of hypersaline water out of the CCS, CASE asserts that the temperature increases allowed by the UHS amendments will increase CCS water evaporation rates and result in higher salinity levels in the CCS (Ex. INT-000 at 20), which will increase the rate of migration of CCS water into groundwater. At hearing, Dr. Stoddard stated that elevated ammonia and phosphorous levels in the Biscayne Bay following injection of freshwater into the CCS proves CCS water is migrating into the Biscayne Bay.²⁹ (Tr. at 307).

5.56 FPL disputed CASE's characterization of CASE's claim. FPL testified that, during the time Dr. Stoddard referenced, ammonia and phosphorous levels in the CCS did not correspond to those found in Biscayne Bay. (*Id.* at 559). FPL also testified that a rise in ammonia levels in the CCS did not correlate with the time frame to which Dr. Stoddard testified. Moreover, FPL disputed Dr. Stoddard's claim that there was a three-day delay between water leaving the CCS and moving into Biscayne Bay. (*Id.* at 560). FPL testified that the lag time is

²⁹ Dr. Stoddard provided the parties with figures and data at the hearing to support his statements. The figures and data were attached to the transcript. However, because the figures and data had not been disclosed to the parties at any time prior to hearing, they were not included as exhibits.

much longer than the three day period Dr. Stoddard claimed. (Tr. at 560). FPL testified that one would expect to see similar concentrations of ammonia and phosphorous in the CCS and the Bay if the lag time was only three days. Dr. Stoddard did not provide any testimony specific to the UHS amendments' effects on salinity in the CCS and migration of hypersaline water out of the CCS. When prompted, Dr. Stoddard could not provide evidence of impacts caused by saltwater migration from the CCS to the environment outside of the CCS, in the Biscayne Bay, or elsewhere. (*Id.* at 304-306).

5.57 The Staff and FPL testified that the freshwater-saltwater interface is six to eight miles inland from the Turkey Point site. (Ex. FPL-001 at 20, 23; Ex. NRC-001 at 24; Ex. FPL-013). Therefore, as stated in the UHS EA (Ex. NRC 009 at 44,468), the water beneath Turkey Point is saltwater. (Ex. FPL-001 at 20, 23; Ex. FPL-013; Ex. NRC-001 at 24; Ex. NRC-009 at 44,468). The interface oscillates within that six to eight mile range over time, and has done so since before construction of the CCS. (Ex. FPL-001 at 36, Tr. at 454-457). Climactic conditions and installation of control structures on canals contribute to these fluctuations. (Ex. FPL-001 at 36). The Staff testified that dense hypersaline water has migrated out of the CCS over its forty year operation into the aquifer below. (Tr. at 519). This has created a hypersaline plume beneath Turkey Point, with the potential to spread and push the interface westward. (*Id.* at 458, 519). This is documented by the analyses incorporated by reference into the UHS EA. (*Id.* at 517-19).

5.58 However, the Staff concluded that the 4 °F increase allowed by the UHS amendments would have no effect on the migration of water from the CCS, or saltwater intrusion. (Ex. NRC-001 at 45). The Staff testified that increases in salinity levels would be of such short duration as to not impact groundwater. (*Id.* at 47). The Staff testified that increases in salinity levels are caused by the natural variation in air temperatures and because as stated in the EA the CCS is recharged by less saline water from precipitation, stormwater runoff, and groundwater. (Ex. NRC-009 at 44,466-67, Tr. at 392). The Staff testified that such minor

temperature and salinity changes over the course of hours or days do not affect the migration and intrusion of water from the CCS, which occurs over months and years. (Ex. NRC-009 at 44,466-67, Tr. at 392).

5.59 FPL testified that even assuming the temperature at the CCS inlet stayed at 104 °F permanently, there would be no increase in saltwater migration out of the CCS beyond natural variations. (Ex. FPL-001 at 58, Tr. at 411). Specifically, FPL testified that salinity levels would increase less than 6 psu in the CCS. (Ex. FPL-001 at 58). This would cause a small increase in the density of the CCS water, leading to a 0.04 feet (less than half an inch) increase in hydraulic head, which drives migration from the CCS. *Id.* FPL testified that this increase is well within the natural fluctuations of hydraulic head between the CCS and Biscayne Aquifer, and of little impact to surrounding groundwater.³⁰ *Id.*

5.60 However, FPL further testified that that this 0.04 feet increase in hydraulic head is actually a conservative estimate. (Ex. FPL-001 at 59). FPL testified that a more accurate estimate is a smaller 0.025 feet increase in hydraulic head. (*Id.*). This is because raising the water temperature 4 °F produces the opposite effect on hydraulic head as does an increase in salinity. (*Id.*). Raising the temperature of water in the CCS decreases its density, because warmer water is less dense than colder water. (*Id.*). Reducing the density of the water reduces the hydraulic head difference between the CCS and groundwater. (*Id.*). Consequently, an increase in water density caused by an increase in salinity is mitigated by the decrease in water density from raising its temperature. (*Id.*). FPL accounted for this interaction and calculated the net effect of this interaction to result in a smaller 0.025 feet increase, instead of the 0.04 feet calculated increase that did not account for the effect of warmer temperatures on the water density. (*Id.*). This 0.025 feet increase in hydraulic head would again be well within natural

³⁰ As explained in the Staff's testimony "[h]ead is a measure of mechanical energy that causes groundwater to flow. Groundwater flows from higher head to lower head." (Ex. NRC-001 at 22).

fluctuations between the CCS and the Biscayne Aquifer, and of little impact to surrounding groundwater. (Ex. FPL-001 at 58-59).

5.61 Based on these determinations, the Staff testified that the hypersaline plume beneath the CCS is unaffected by the amendments. (Ex. NRC-001 at 47, 50, Tr. at 458-59). Because the plume is not affected, the interface six to eight miles westward is also unaffected. Thus, Staff concluded that the amendments do not affect the interface. (Ex. NRC-001 at 47, 50, Tr. at 458-59).

5.62 CASE provided no evidence to dispute the Staff's and FPL's testimony. CASE only noted that salinity and temperature in the CCS were at very high levels when the UHS amendments were approved. (Ex. INT-076 at 18-19). FPL and the Staff do not dispute this. FPL testified that salinity and temperature in the CCS reached levels unseen before 2014. (Ex. FPL-001 at 15). And the Staff's EA noted that the CCS was hot and hypersaline and discussed the events that contributed to these levels. (Ex. NRC-009).

5.63 FPL also testified that these temperature and salinity levels have decreased, not increased, since the amendments, partly due to FPL's mitigation efforts. (Ex. FPL-001 at 19).

5.64 In light of the evidence presented by the Staff and FPL, and CASE's failure to provide an adequate evidentiary basis for us to conclude that their concerns are well-founded, we find Staff's conclusion that the amendments will not appreciably increase salinity in the CCS to be reasonable. As stated before, given his lack of expertise in hydrogeology and failure to directly address the issues underlying Contention 1, we accord no weight to Dr. Stoddard's testimony. Further, we find nothing in his testimony credibly disputing the Staff's conclusions. Moreover, CASE does not dispute that the salinity in the CCS has decreased since the implementation of the UHS amendments. Thus, we find that the Staff's EA reasonably concluded that the amendments will not appreciably increase salinity in the CCS, nor migration of water out of the CCS.

b. The Staff Reasonably Concluded That CCS Temperature Increases
Would Be of Short Duration and Have No Effect on Groundwater

5.65 In support of its contention that the UHS amendments will increase the migration of hypersaline water out of the CCS, CASE asserts that the Staff did not consider CCS temperatures trending upwards since the EPU. CASE's Petition at 5. CASE also asserts that the UHS amendments will increase the average temperature of the CCS well above normal temperatures. (Ex. INT-000 at 19). CASE provides 2 figures to demonstrate that temperature has been increasing steadily in the CCS as a result of the EPU and that such increases will continue in the long term. (Ex. INT-002, Slides 21-22). CASE did not provide any explanation or expert support for its figures.

5.66 The UHS EA stated that under the challenged amendments, the CCS could experience temperatures between 100 °F and 104 °F at the TS monitoring location at the intake, and that higher temperatures would increase evaporation rates and salinity in the CCS. (Ex. NRC-009 at 44,466-67). However, the UHS EA stated that due to the natural variability of temperatures and freshwater recharge in the CCS, such temperature and salinity increases would be of short duration. *Id.* The EA stated that because these increases would be of such short duration, these increases in the CCS do not affect the groundwater beneath it. *Id.* In light of Staff and FPL's testimony, as described below, we find this conclusion to be reasonable.

5.67 Both the Staff and FPL testified that temperatures in the CCS are highly variable and affected by multiple factors, including ambient weather conditions, solar absorption, and the number of units in operation. (Ex. NRC-001 at 39-40, 51; Ex. FPL-001 at 14-15). Such variations occur on daily and seasonal time scales. (Ex. NRC-009 at 44,466-67; Ex. NRC-001 at 39-40, 50-51; Ex. FPL-001 at 14-15). The Staff testified that prior to the summer of 2014, the UHS temperature at intake never peaked above 100 °F. (Tr. at 400). Further, the Staff testified that even when more British thermal units ("BTUs") were going into the UHS, the 100 °F temperature limit was not reached. (Ex. NRC-001 at 13-14, 39-40).

5.68 Additionally, the Staff testified that in the summer of 2014 when the 100 °F UHS temperature limit was exceeded, temperatures remained above the limit for no more than eight hours at a time. (Tr. at 400-01). Consequently, the Staff testified that it did not consider it reasonable to assess the impacts of a constant 104 °F CCS temperature at intake for the remainder of FPL's license. (Ex. NRC-028; Tr. at 405; See also Ex. NRC-009 at 44,466-67).

5.69 The Staff testified that temperature changes that occur on the order of hours or days do not affect the migration and intrusion of water out of the CCS, which occurs on the order of months to years. (Ex. NRC-009 at 44,467; Tr. at 392). Thus, the Staff concluded that the possible 4° change in the intake water temperature limit allowed by the amendments are unlikely to measurably impact groundwater. (Ex. NRC-001 at 52).

5.70 FPL testified that the overall effect on average CCS temperature from the hours CCS temperatures exceeded 100 °F was virtually immeasurable.³¹ (Ex. FPL-001 at 61; Tr. at 408). Furthermore, FPL testified that the temperature at intake has not exceeded 100 °F since the amendments were approved. (Ex. FPL-001 at 61, Tr. at 408). Additionally, as discussed above, FPL testified that even a permanent 4 °F temperature increase would minimally affect the migration of water out of the CCS. (Ex. FPL-001 at 58; Tr. at 411).

5.71 The Staff and FPL also testified that the change in thermal output from the EPU was not the cause of the temperatures exceeding 100 °F in the CCS. (Ex. FPL-001 at 15-16; NRC-001 at 62). The Staff explained that while the EA for the EPU stated that the EPU would cause a 2.0 °F to 2.5 °F rise in temperatures in the CCS, this was based on the assumption that all four units using the CCS would be operating. (Ex. NRC-022 at 20,062; Tr. at 385-88). In

³¹ FPL testified that it recorded temperatures at a monitoring well upstream of the intake between August 2014 (i.e., when the amendments were approved) and September of 2015. (Ex. FPL-001 at 60). Of the approximately 8,000 hours FPL recorded temperatures during that period, CCS temperatures exceeded 100 °F at that well for 61 hours. (*Id.*; Tr. at 407-08) (0.7% of time). These exceedances increased CCS temperatures approximately 0.005 °F above what CCS temperatures would have been during that time period had those exceedances not occurred, a virtually immeasurable amount, as characterized by FPL. (Ex. FPL-001 at 61-62; Tr. at 409).

December 2010 and prior to the installation and implementation of the EPU, Unit 2, a fossil plant, ceased operation as a power generator (Ex. NRC-001 at 13-14; Tr. 382-85). The Staff testified that, therefore, the thermal output from the Units 1, 3, and 4 to the CCS actually decreased from when Units 1, 2, 3, and 4 were operating prior to the EPU. (Ex. NRC-001 at 39-40). Prior to December 2010, when Units 1 through 4 were operating, the combined thermal loading from Units 1 through 4 to the CCS was at its highest, and the CCS temperatures did not exceed 100 °F. Although the heat discharged from Units 3 and 4 to the CCS increased with the EPU, the total heat discharged from Units 1, 3, and 4 after the EPU was less than the total heat discharged from all four units prior to the EPU. FPL testified that as a result of Unit 2 ceasing operation as a power generator, the thermal output decreased by four percent after the EPU (Exs. FPL-009, FPL-001 at 15-16). The Staff also testified that the thermal output decreased after the EPU. (Ex. NRC-001 at 39-40).

5.72 In light of the testimony and exhibits provided by the Staff and FPL and CASE's failure to dispute the testimony and evidence, we find reasonable the Staff's conclusion that temperature increases allowed by the UHS amendments will be of short duration and of no effect to groundwater. CASE presented no credible testimony or evidence disputing the Staff's conclusions. Moreover, CASE did not dispute that the temperatures in the CCS have not been above 100 °F since implementation of the amendments. Thus, we find that the Staff sufficiently considered CCS temperature conditions in its NEPA analysis for the UHS amendments and reasonably concluded that the temperature increases allowed by the amendments would be of short duration and not effect groundwater.

c. The Staff Reasonably Concluded that the Conditions
Necessitating the UHS Amendments are Unlikely to Recur

5.73 Contention 1 claims that the UHS amendments will increase the migration of hypersaline water out of the CCS. CASE asserts that the conditions necessitating the UHS amendments are likely to recur because the EPU led to a permanent increase in temperatures in

the CCS, which led to the hypersaline conditions and algal bloom. (Ex. INT-076 at 21-25).

CASE provides two figures to support this assertion. (Ex. INT-002, Slides 21-22). CASE also provides a graph depicting an increasing trend in salinity in the CCS from 1973 to present. (Ex. INT-003; Ex. INT-000 at 23).

5.74 The Staff disputes CASE's assertions. First, the Staff testified that this upwards trend in salinity was documented in the analyses incorporated into the UHS EA, particularly the EPU EA. (Tr. at 436-37, 530-31). Thus, the Staff's position is that hypersaline CCS conditions existed before the EPU and that the UHS EA accounted for these conditions. (Tr. at 531).

5.75 Further, the Staff testified that its conclusion that the UHS license amendments would not impact groundwater was based in part on its understanding that the particular combination of events in summer 2014 that led to the need for the amendments—summer temperatures, low rainfall, and the algal bloom—was unlikely to recur prospectively. (*Id.* at 422). In light of the Staff and FPL's written and oral testimony, we find this conclusion reasonable.

5.76 Precipitation and inflow from the Biscayne Aquifer usually recharge the CCS with fresher water, thereby lowering salinity levels. (Ex. FPL-001 at 14). However, as the Staff and FPL testified, 2013 and 2014 saw high summer temperatures and unusually low precipitation amounts at the Turkey Point site. (*Id.* at 15; Ex. NRC-001 at 39). This led to above normal salinity levels in the CCS during summer of 2014. (Ex. FPL-001 at 15). Additionally, as the Staff testified, the decommissioning of fossil fuel Unit 2 in 2013, and respective outages associated with modifications and upgrades required to implement the uprates of Units 3 and 4 in 2013 and 2014, slowed flow rates in the CCS, which further reduced the ability of the CCS to cool itself. (Ex. NRC-001 at 39-40; NRC-025 at 42).

5.77 Both the Staff and FPL testified that the unusual conditions in 2013 and 2014 aided the growth and persistence of a particularly injurious type of algae to bloom in the CCS. (Ex. FPL-001 at 15, 55; Ex. NRC-001 at 39-40). The hot, hypersaline, low flow conditions in the CCS allowed the algae to thrive. (Ex. FPL-001 at 15; Ex. NRC-025 at 42). FPL testified at

hearing that the algae bloom in the CCS in the summer of 2014 was a unique and particularly filamentous algae, which had never occurred in the CCS before, or since. (Tr. at 412). FPL testified that the exceptional concentration and characteristics of the algal bloom that summer greatly diminished the CCS' ability to transfer heat to the ambient air. (*Id.*).

5.78 As FPL's witnesses testified, this created a negatively reinforcing cycle where increases in temperature and salinity promoted the algae, diminishing the heat transfer ability of the CCS, further increasing temperatures and salinity. (Ex. FPL-001 at 15). As a result, temperatures and salinity levels in the CCS reached historic levels in the summer of 2014, prompting FPL to seek the UHS amendments, and to separately seek State authorization for aquifer withdrawals to mitigate salinity in the CCS. (Ex. FPL-001 at 15-16).

5.79 FPL was granted authorization by the State to withdraw and inject fresher water into the CCS to lower salinity levels, and to chemically treat the CCS with algaecides. (*Id.* at 16-19). Additionally, FPL implemented a dredging program to help alleviate sediment build up and improve flow conditions. (*Id.* at 18). These actions lowered salinity levels in the CCS from over 90 ppt to under 60 ppt.³² (*Id.* at 16-19, Tr. at 412-14).

5.80 FPL testified that when the algae and sedimentation issues were resolved, the CCS conditions improved throughout the summer of 2015, despite extreme drought. (*Id.* at 413). FPL further testified that temperatures in the CCS, several thousand feet upstream of the intake, which do not factor into the TS UHS temperature limit, have exceeded 100 °F for less than 1% of operating time since the amendments were approved, i.e., after summer of 2014. (Ex. FPL-001 at 60, Tr. at 407-08). The Staff and FPL testified that prior to the summer of 2014, the UHS temperature at the intake never peaked above 100 °F, nor has it since. (Tr. at 400, 408; Ex. FPL-001 at 60-61).

³² Although the algaecides had little impact, the fresh water additions from the withdrawals and rainfall brought the filamentous algae under control. (Ex. FPL-001 at 19; Tr. at 501.).

5.81 In light of the Staff's and FPL's testimony and exhibits, and CASE's failure to dispute that testimony and evidence, we find reasonable the Staff's conclusion that the unusual combination of conditions causing higher than normal temperatures and salinity in the CCS is unlikely to recur in the future. As discussed above, CASE's assertions that the EPU caused the increase in temperatures in the CCS and will continue to do so are not credible and are not supported by an adequate evidentiary basis. Nor does CASE dispute the Staff's and FPL's testimony that the heat load into the CCS after the EPU actually decreased and that the unusual combination of compounding events led to the 2014 increases in salinity and temperature. Similarly, the long term salinity trend CASE references is documented in the analyses incorporated into the UHS EA. Moreover, CASE does not dispute that temperatures and salinity in the CCS have decreased since implementation of the amendments. For these reasons, we find that the Staff reasonably concluded in its UHS EA that the unusual combination of conditions causing higher than normal temperatures and salinity in the CCS is unlikely to recur in the future.

4. The Staff's Conclusion That the Amendments and FPL's Authorized Aquifer Withdrawals Will Not Significantly Impact Underlying Aquifers Was Reasonable

5.82 As reformulated by this Board, the second prong of Contention 1 states that the UHS EA does not adequately address the impact of increased temperature and salinity in the CCS on saltwater intrusion arising from the withdrawal of fresh water from surrounding aquifers to mitigate conditions within the CCS.

5.83 CASE asserts that the UHS EA did not sufficiently address the impacts on saltwater intrusion of FPL's planned withdrawals from the Biscayne and Floridan Aquifers, and the L-31E canal. (Ex. INT-000 at 52-53). CASE argues that the removal of freshwater from the aquifers beneath Turkey Point and the greater area will increase the rate of saltwater intrusion. (*Id.* at 52-53).

5.84 The Staff and FPL dispute this claim. The Staff argues that the UHS amendments decrease the need for withdrawals to mitigate CCS conditions. (Ex. NRC-049 at 17-20).

Additionally, Staff and FPL argue that the withdrawals have a beneficial impact on the CCS and combat saltwater intrusion beneath the Turkey Point site, as documented in the EA. (Ex. NRC-049 at 17-20; FPL's SOP at 20-23; Ex. FPL-001 at 45-46). The Staff and FPL argue that this is because the addition of less saline water into the CCS will decrease salinity levels in the CCS, thereby decreasing the rate at which CCS water migrates into the Biscayne Aquifer, and ultimately slowing the migration of the hypersaline plume. (Ex. NRC-049 at 18-19; NRC-001 at 48, Ex. FPL-001 at 45-46). The Staff and FPL also argue that the Biscayne Aquifer beneath the Turkey Point site is saltwater and that the freshwater/saltwater interface is too far away to be affected by pumping from the Biscayne Aquifer near the CCS. (Ex. NRC-001 at 48). However, if pumping could have any effect on the freshwater-saltwater interface, it would be to decrease saltwater intrusion into the Biscayne Aquifer as pumping would lower the pressure on the seaward side of the freshwater-saltwater interface. (FPL's SOP at 22; Ex. NRC-001 at 48).

5.85 The Staff testified that the amendments do not impact saltwater intrusion arising from FPL's planned withdrawals because: (1) the amendments decrease the need for additional water injections into the CCS (Ex. NRC-001 at 53, 55); (2) the Biscayne and Floridan Aquifers beneath the Turkey Point site are not freshwater and are not hydrologically connected to one another (*Id.* at 25); and (3) FPL's withdrawals from the L-31 Canal were unlikely at the time of the EA and would otherwise have no impact (Tr. at 391; Ex. NRC-001 at 49). For the foregoing reasons, we find these conclusions reasonable.

a. The Staff Reasonably Concluded That the Amendments
Decrease the Need for Withdrawals to Mitigate CCS Conditions

5.86 CASE asserts that the UHS amendments will increase temperature and salinity in the CCS, thereby requiring more withdrawals by FPL to keep CCS temperatures and salinity levels under control. (Ex. INT-000 at 53; Ex. INT-076 at 29). CASE did not provide any evidence or expert testimony to support these assertions.

5.87 FPL disputes CASE's assertions. FPL testified that prior to the UHS amendments, FPL had to take action to reduce power multiple times in July and August of 2014, as temperatures approached the previous 100 °F UHS limit. (Ex. FPL-001 at 56). FPL testified that FPL's withdrawals have been utilized to both reduce temperature to avoid approaching the UHS limit, and to reduce salinity in its ongoing regulatory process with the State. (*Id.*). FPL testified that the addition of the 14 MGD withdrawal from the Floridan Aquifer³³ would be sufficient to bring the salinity of the CCS down to the level of Biscayne Bay (approximately 34 psu) within 2 years. (Ex. FPL-001 at 45; Ex. FPL-027). According to FPL, none of FPL's withdrawals were triggered by the UHS license amendments. (Ex. FPL-001 at 56).

5.88 The Staff also disputes CASE's assertions. The Staff testified that increasing the temperature limit of the CCS actually decreases the need to consume water. (Ex. NRC-001 at 51-54). The Staff explained that increasing the allowable temperature results in further operational flexibility before FPL is required to either initiate a shutdown or take action to cool the CCS via water injection. (*Id.*).

5.89 The Staff also testified that increasing the temperature would result in a slight improvement to the CCS' overall cooling performance because the increase in temperature increases the evaporation rate. (*Id.* at 53-54). Evaporation acts as a self-correcting temperature regulation by removing heat from the CCS water. (Ex. NRC-001 at 54). As heat is removed through evaporation, average CCS temperature returns to lower levels. (*Id.*). Because of the large volume of the CCS, there is a significant increase in the evaporation rate. (*Id.* at 55). Consequently, a short-term rise in CCS temperature will be mitigated quickly by evaporation. (*Id.*). For these reasons, the Staff concluded that the increase in allowable temperature prior to

³³ This 14 MGD value was derived from the results of modeling performed by FPL's witness, Mr. Andersen, which was appended to FPL's 2014 application to the State for the authorization to withdraw from the Floridan Aquifer. (Ex. FPL-027).

reaching the limiting condition of operation results in decreased demand to consume water to cool the CCS. (*Id.* at 51-54).

5.90 Further, the Staff noted at hearing that, since FPL is already required to inject water into the CCS to reduce salinity, the conclusion that the amendments decrease the need to consume water to mitigate CCS conditions is currently hypothetical. (Tr. at 376). The Staff explained that its testimony regarding this conclusion was primarily focused on temperature. Under the new TS UHS temperature limit, if the temperature hypothetically was between 100 °F and 104 °F, FPL could continue operating Units 3 and 4 without having to shut down or to inject water to cool the UHS (intake cooling water to the component cooling water heat exchangers) to below the new TS limit. (*Id.*). The Staff clarified that the injections reduce temperature in addition to lowering salinity levels. (*Id.*).

5.91 FPL also testified that such a reduction in temperature is supplementary to lowering salinity levels. (Ex. FPL-001 at 42). FPL testified that the addition of the water increases flow rate, decreases turbidity via dilution, and creates additional surface area for cooling. (*Id.*). FPL testified that this makes the CCS a more effective cooling device. (*Id.*).

5.92 The Staff also acknowledged that another option to address temperature in the CCS would be for FPL to reduce power at Units 3 and 4. The Staff explained that this scenario was examined as the “No Action” alternative in the UHS EA’s alternatives discussion. (Tr. at 378; Ex. NRC-009 at 44,469). FPL testified that it reduced power multiple times in the summer of 2014. (Ex. FPL-001 at 56). FPL testified that as a general rule, without considering any other factors, decreasing power 200 megawatts can result in a 1°F reduction in CCS temperature. (Tr. at 415). However, there is a considerable response time to achieve the temperature reduction. (Tr. at 415). The Staff explained that the primary basis for rejecting the “No Action” alternative was the potential impacts to grid reliability if the units were shut down. (Tr. at 378-80).

5.93 CASE calls the Staff’s testimony about the decreased demand to consume water “[i]nteresting conjecture.” (Ex. INT-076 at 29). CASE argues that if the UHS amendments did in

fact decrease water consumption, then FPL would not have requested authorization to withdraw from the L-31 canal after the amendments had been issued. (Ex. INT-076 at 29-30). However, CASE offers no support for these assertions.

5.94 FPL testified that it requested from the State an emergency authorization in August 2014 to quickly address salinity levels in the CCS in 2014, as its Floridan withdrawal authorization request was on appeal. (Ex. FPL-001 at 38-39). For the same reason, FPL sought and was granted similar requests for emergency authorizations to withdraw from the L-31 canal during the 2015 and 2016 summers. (Ex. FPL-001 at 17; Tr. at 479). FPL testified that it will switch from these short term sources once the Floridan withdrawal authorization is granted. (Ex. FPL-001 at 17; Tr. at 478-79, 489). Additionally, FPL testified that modeling predicts that FPL will not need to seek other groundwater sources to mitigate conditions in the CCS once the 14 MGD Floridan wells are completed. (Tr. at 562-63).

5.95 In light of the testimony and exhibits presented by FPL and the Staff, and CASE's failure to present an adequate evidentiary basis for us to conclude that their concerns on this issue are well-founded, we find the Staff's conclusion that the amendments decrease the need to consume additional water to mitigate conditions in the CCS to be reasonable. First, as a result of the UHS amendments, FPL will no longer need to cool the CCS below 100 °F to avoid a shut down. Further, the Staff reasonably concluded that any temperature increases will be short in duration and have a negligible effect on salinity in the CCS.

5.96 Second, CASE's claim that FPL's L-31 emergency authorization request shows the amendments have increased the need for withdrawals is without merit. As FPL testified, the request was made to lower the salinity levels in the CCS while FPL awaited its long term option. As such, we find the Staff reasonably concluded that the amendments will decrease the need to consume additional water withdrawals.

b. The Staff Reasonably Concluded That the Aquifers Beneath Turkey Point are Not Freshwater and are Not Hydrologically Connected to One Another

5.97 CASE also makes several assertions related to the aquifers beneath Turkey Point. These aquifers are the Biscayne and the Upper Floridan. (Ex. NRC-036 at 10-11). The Biscayne Aquifer is part of the surficial aquifer system and lies beneath ground surface. *Id.* The Upper Floridan lies below the Biscayne Aquifer, between several hundred and thousands of feet below ground surface. *Id.* See also Ex. NRC-036 at 11, Figure 7 (showing hydrostratigraphy of the surficial aquifer system and uppermost part of the intermediate confining unit from west to east across central Miami-Dade County).

5.98 The CCS and Biscayne Aquifer are not hydrologically connected to the Upper Floridan Aquifer. (Ex. FPL-001 at 19-20, 51; Ex. NRC-001 at 24, 26; Tr. at 431-33). The two aquifers are separated by an intermediate confining unit. (Ex. FPL-001 at 19-20, 51; Ex. NRC-001 at 24). The presence of the confining unit is stated in the EA. (Ex. NRC-009 at 44,468). This confining unit is several hundred feet thick and comprised of low permeability sediment, which retards vertical communication between the two aquifers. (Ex. NRC-001 at 26; Ex. FPL-022 at 14; Tr. at 431). Consequently, the withdrawals from the Upper Floridan Aquifer will not increase saltwater intrusion in the Biscayne Aquifer. (Ex. NRC-001 at 50-51).

5.99 In support of its contention, CASE asserts that FPL's State authorized withdrawals will increase saltwater intrusion by removing freshwater from the aquifers. CASE appears to assert that FPL's authorization for the Biscayne Aquifer will withdraw freshwater. (Ex. INT-000 at 52). CASE also asserts that the Biscayne Aquifer and Upper Floridan Aquifer are hydrologically connected, or at the very least, that this connection is not well understood. (*Id.* at 52-53). CASE argues that these supposed impacts should have been discussed in the UHS EA. (*Id.*). It appears that CASE relies on a USGS Groundwater Atlas for the former assertion, and blog article for the latter. (*Id.* at 51; Ex. INT-0047; Ex. INT-076 at 33; Ex. INT-013). CASE did not

provide any expert testimony in support of its assertions or exhibits. Without any supporting expert testimony, these assertions are mistaken and unfounded.

5.100 Both the Staff and FPL dispute these assertions. As discussed above, the Staff and FPL testified that the freshwater-saltwater interface is six to eight miles inland from the Turkey Point site. Therefore, as stated in the UHS EA, the water beneath Turkey Point is saltwater. (Ex. FPL-001 at 20, 23; Ex. FPL-013; Ex. FPL-020; Ex. NRC-001 at 24; Ex. NRC-009 at 44,468). Both the Staff and FPL testified that the CCS and Biscayne Aquifer are in direct hydrologic connection and water exchanges easily between the two. (Ex. NRC-001 at 17, 26; Ex. FPL-001 at 35). FPL testified that withdrawals from the Biscayne Aquifer will not pull the interface further inland because FPL's withdrawals from that aquifer are seaward of the freshwater/saltwater interface. (*Id.* at 47). The Staff testified that if the withdrawals have any effect, it will be to pull the interface seaward by lessening the hydrostatic pressure on the saltwater side of the interface. (Ex. NRC-001 at 48). Consequently, the Staff stated that FPL's withdrawals from the Biscayne Aquifer do not impact a freshwater resource. (Tr. at 393-94).

5.101 Both FPL and the Staff testified that the Upper Floridan Aquifer beneath Turkey Point is brackish.³⁴ (Ex. FPL-001 at 48; Ex. FPL-021; Ex. NRC-001 at 25; Tr. at 394, 434). This is noted in the UHS EA. (Ex. NRC-009). The EA also describes the Upper Floridan Aquifer as brackish. (*Id.* at 44,468). Consequently, the Staff stated that FPL's withdrawals from the Upper Floridan Aquifer would not impact a fresh groundwater resource. (Tr. at 394). Additionally, FPL testified that the freshwater-saltwater interface in the Upper Floridan Aquifer is so far inland from Turkey Point as to be irrelevant to FPL's withdrawals. (*Id.* at 486-87).

³⁴ FPL testified that water from the Upper Floridan is approximately 2.5 psu, while freshwater is between 0 and 0.5 psu. (Ex. FPL-001 at 48; Tr. at 483-84, 500).

5.102 CASE agreed that water from the Upper Floridan is brackish, but stated it is minimally so and with freshwater characteristics. CASE Answer to FPL's Motion to Dismiss Contention 1, or in the Alternative, for Summary Disposition at 7.

5.103 At hearing, the Board introduced its own exhibit, which contained the State's regulations providing ground water classes, standards, and exemptions. (Ex. BRD-001). The regulations provide that potable water in the State, the G-I classification, is water below 3,000 milligrams per liter of total dissolved solids (mg/L TDS) in a sole source aquifer. (*Id.* at 613). A G-II classification under the regulations (i.e., non-potable water) is defined as between 3,000 and 10,000 mg/L TDS. FPL witness, Mr. Andersen, testified that 3,000 mg/L TDS is equivalent to 3 psu. (Tr. at 484). Mr. Andersen clarified that the Upper Floridan is not a sole source aquifer, and that it is generally understood as brackish and non-potable. (*Id.* at 485).

5.104 As mentioned above, FPL testified that FPL's withdrawals from the Upper Floridan Aquifer will be beneficial to combating saltwater intrusion in the Biscayne Aquifer. (Ex. FPL-001 at 45). As stated above, removing the water from the Upper Floridan Aquifer does not harm the Biscayne Aquifer because of the confining unit that separates them. (Ex. FPL-001 at 19-20, 51; Ex. NRC-001 at 24). Rather, addition of the fresher Upper Floridan water will begin to dilute the water in the CCS, reducing its salinity. (*Id.*). As the CCS becomes less saline, it will be less saline than the water in the Biscayne Aquifer beneath the CCS and begin to mix and decrease the overall salinity of the plume in the Biscayne Aquifer beneath the CCS. (*Id.*). This will slow down the westward advance of the freshwater-saltwater interface and will, with time, cause the hypersaline plume to recede both laterally to the east and vertically to the base of the aquifer. (*Id.*). These benefits were discussed in the UHS EA. (Ex. NRC-009 at 44,468).

5.105 CASE appears to also assert that withdrawals from the Upper Floridan Aquifer will capture waste injected into the Lower Floridan Aquifer, thereby contaminating the CCS and the surrounding area. (Ex. INT-000 at 53; Ex. INT-076 at 33-34). CASE has presented no evidence

in support of this assertion. In contrast, FPL provided evidence showing that the Upper and Lower Floridan Aquifers are separated by a middle confining unit. (Ex. FPL-022 at 16).

5.106 In light of the testimony and evidence presented by the Staff, FPL, and CASE, we find that the Staff reasonably concluded that the aquifers beneath Turkey Point are not freshwater aquifers and are not hydrologically connected to one another. CASE's assertions to the contrary are unsupported and without merit. In fact, CASE contradicted its assertions by stating that FPL's Biscayne and Upper Floridan Aquifer withdrawals are irrelevant to this discussion. CASE Answer to FPL's Motion to Dismiss Contention 1, or in the Alternative, for Summary Disposition at 5. And the information CASE cited to support its assertions actually suggests that the Biscayne Aquifer is saltwater several miles inland. (Ex. INT-0042 at Fig. 40). The article CASE cites provides nothing on the connection between the Biscayne and Upper Floridan Aquifers. Furthermore, CASE's claim that FPL's Upper Floridan withdrawals could capture waste from the Lower Floridan Aquifer is also unsupported. Additionally, as the Staff and FPL testified, the withdrawals and injection into the CCS will combat saltwater intrusion, rather than exacerbate it. Consequently, we find the Staff's conclusion reasonable.

c. The Staff Reasonably Concluded That FPL's Withdrawals from the L-31 Canal Were Unlikely at the Time of the UHS EA

5.107 In support of its contention, CASE asserts that the Staff's EA should have discussed FPL's withdrawals from the L-31 canal because those withdrawals will increase saltwater intrusion in the Biscayne Aquifer. (Ex. INT-000 at 57-58). CASE asserts that the water FPL is withdrawing from the L-31 canal is needed to combat saltwater intrusion. (Ex. INT-076 at 31). CASE presented no evidence or testimony to support its assertions.

5.108 The L-31 canal is a freshwater canal that intercepts water as it flows eastward to tide. (Ex. FPL-001 at 51; Ex. FPL-033 at 3). The canal reduces the potential for flood and storm surge damage, as well as saltwater intrusion. (Ex. FPL-001 at 51; Ex. FPL-033 at 4). Structures at the mouth of the canal prevent backflow of seawater into the canal. (Tr. at 545).

5.109 The Staff testified that the UHS EA did not discuss FPL's withdrawals from the L-31 canal because the Staff did not believe FPL was likely to seek authorization for such withdrawals at that time. (*Id.* at 391). The Staff testified that it was aware that FPL was considering a request to withdraw from the L-31 canal. (Ex. NRC-001 at 49; Tr. at 391). However, FPL did not request authorization to withdraw from the L-31 canal until nearly a month after the Staff issued the UHS EA. (Ex. FPL-001 at 52, 67; Ex. FPL-031). Consequently, at the time of the UHS LAR review, the Staff concluded that withdrawals from the L-31 canal were unlikely at the time the Staff reviewed the UHS LAR. (*Id.*).

5.110 FPL testified that its 2014 Emergency Authorization only allowed FPL to withdraw water that would otherwise be discharged to tide, in excess of an environmental reservation for Biscayne Bay. (Ex. FPL-001 at 52; Ex. FPL-031 at 14-15; Tr. at 478). As further explained in the 2014 Emergency Authorization, this means that FPL may only withdraw water in excess of that allocated to Biscayne Bay for the protection of fish and wildlife in accordance with the State's Nearshore Central Biscayne Bay reservation rule. (Ex. FPL-031 at 5). If not withdrawn by FPL, this water would be discharged to tide via several coastal canal structures. (Ex. FPL-001 at 52-53; Ex. FPL-031 at 14-15). South Florida Water Management District calculated and communicated to FPL on a daily basis the amount of water allotted to FPL for withdrawal. (Ex. FPL-031 at 15). Therefore, the only water available to FPL from the L-31 canal was water that would otherwise be discharged into Biscayne Bay, in excess of the amount allocated to protect the Bay and its wildlife. (Ex. FPL-001 at 53).

5.111 On January 26, 2015, months after the UHS amendments were granted, FPL sought a consumptive use permit to withdraw water during the 2015 and 2016 rainy seasons (June 1—November 30). (Ex. FPL-001 at 53; Ex. FPL-033). This permit included the same restrictions as the 2014 Emergency Authorization. (Ex. FPL-001 at 53-54; Ex. FPL-033 at 12). FPL testified that it did not use this authorization in 2015 because the Order to grant the permit was challenged. (Ex. FPL-001 at 54). Consequently, FPL again sought and was granted an

Emergency Authorization to withdraw water from the L-31 through November 30, 2015. (Ex. FPL-001 at 54; Ex. FPL-034).

5.112 Eleven days prior to the hearing in this proceeding, FPL prevailed on the challenge to the Order granting the permit for 2016. (Tr. at 481; Ex. FPL-037). Among the judge's findings was that FPL had provided reasonable assurance that the proposed use of the L-31 canal would not cause harmful saltwater intrusion. (Ex. FPL-037 at 17).

5.113 FPL and the Staff testified that FPL's withdrawals from the L-31 canal will not negatively impact saltwater intrusion. (Ex. FPL-001 at 54; Ex. NRC-001 at 49). The amount of water drained from the land via the L-31 canal will not increase by diverting water from it into the CCS, i.e., there will be no net gain or loss in water drained from the land by diverting water from the L-31 Canal into the CCS. (Ex. FPL-001 at 55; Ex. NRC-001 at 49). The only lost water is the amount that would otherwise discharge into Biscayne Bay in excess of that necessary to protect the Bay and its wildlife. (Ex. FPL-001 at 52-53). FPL testified that the addition of the L-31 canal water into the CCS will mitigate saltwater intrusion by lowering the salinity in the CCS, thereby lowering the salinity of any water migrating out of the CCS. (*Id.* at 54).

5.114 In light of the testimony presented by the Staff, FPL, and CASE, we find the Staff reasonably concluded that FPL was unlikely to withdraw water from the L-31 canal at the time of the Staff's review. Given that FPL had not made a formal request for authorization to withdraw from the L-31 and had other options available, the Staff's decision to not include an analysis of these withdrawals in the UHS EA was reasonable. We also find that the Staff reasonably concluded that FPL's withdrawals from the L-31 will not cause any new or significant impacts on saltwater intrusion. The restrictions placed on FPL's withdrawals ensure that FPL only uses water that has no purpose other than to be discharged into Biscayne Bay. Moreover, the addition of water from the L-31 Canal will lower salinity in the CCS and thereby help mitigate saltwater intrusion caused by the migration of water from the CCS. CASE has presented nothing

to support its testimony or controvert these findings. Therefore, we find the Staff's conclusion reasonable.

VI. OTHER LEGAL ISSUES RAISED BY THE BOARD

6.1 The Board directed the parties to brief three legal issues not raised by CASE. In particular, at the hearing, the Board directed the parties to brief the topic of segmentation and reliance on State actions. Following the hearing, the Board directed the parties to brief the legal meaning and effect of a February 15, 2016 order by a Florida administrative judge. The Staff hereby provides its briefing on these three legal matters.

A. Segmentation

1. Legal Standards

6.2 An agency's NEPA analysis must consider the environmental impacts of the proposed agency action together with other contemporaneous or future agency actions (either proposed or approved) that are connected to the instant proposed agency action. *Delaware Riverkeeper Network v. F.E.R.C.*, 753 F.3d 1304, 1309 (D.C. Cir. 2014) (citing 40 C.F.R. § 1508.25(a)).

6.3 An agency impermissibly "segments" NEPA review when it divides connected, cumulative, or similar federal actions into separate projects and thereby fails to address the true scope and impact of the activities that should be under consideration. *Id. at* 1313. Under NEPA, "proposals for ... actions that will have cumulative or synergistic environmental impact upon a region ... *pending concurrently before an agency* ... must be considered together." *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976)(emphasis added).

6.4 A NEPA analysis "need not delve into the possible effects of a hypothetical project, but need only focus on the impact of the particular proposal at issue and *other pending or recently approved proposals that might be connected to or act cumulatively with the proposal*

at issue.” *Id.* (quoting *National Wildlife Federation v. FERC*, 912 F.2d 1471, 1478 (D.C. Cir. 1990)) (emphasis in quote).

6.5 For an action to be considered with another action under NEPA, that action “must at least constitute a ‘proposal’ *pending before the agency* (i.e., ripeness), and must be in some way interrelated with the action that the agency is actively considering (i.e., nexus).” *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 N.R.C. 278, 295 (Apr. 2002) (“McGuire/Catawba”) (emphasis added).

6.6 In determining what constitutes a “proposal” under NEPA, the Commission found it a reasonable approach to require that actions be concrete or reasonably certain, not “merely contemplated.” McGuire/Catawba, CLI-02-14, 55 N.R.C. at 295. Once determined to be a “proposal,” the agency must then determine if two actions share the requisite nexus (i.e., are the projects so interdependent that it would be unwise or irrational to complete one without the other). See *id.* at 297 (quoting *Webb v. Gorsuch*, 699 F.2d 157, 159 (4th Cir. 1983)).

6.7 Although the Commission has consistently stated that it is not bound by the Council on Environmental Quality’s (CEQ) NEPA regulations, those regulations are entitled to “substantial deference” where applicable. *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-02, 33 NRC 61 (1991).

6.8 Under the CEQ’s regulations, an agency is required to consider in its review actions that are connected, cumulative, and similar. 40 C.F.R. § 1508.25(a)(1)-(3). Actions are connected if they: (i) [a]utomatically trigger other actions which may require environmental impact statements; (ii) [c]annot or will not proceed unless other actions are taken previously or simultaneously; or (iii) [a]re interdependent parts of a larger action and depend on the larger action for their justification. 40 C.F.R. § 1508.25(a)(1)(i)-(iii). Actions are cumulative if they have cumulatively significant impacts when viewed with other *proposed* actions. 40 C.F.R. § 1508.25(a)(2) (emphasis added). Similar actions have similarities that provide a basis for

evaluating their environmental consequences together when viewed with other *reasonably foreseeable or proposed* agency actions. 40 C.F.R. § 1508.25(a)(3) (emphasis added)

2. Analysis

6.9 We find that the Staff did not impermissibly segment the UHS amendments and the EPU, or any other action for that matter, because there was no interdependent, proposed action at the time of the Staff's review. The EPU was completed two years before FPL requested the UHS amendment, and was proposed long before that. (Ex. NRC-022). Similarly, the licenses for Units 3 and 4 were renewed over a decade prior to FPL's request for the UHS amendments. Neither of these actions were pending before the agency at the time of the Staff's review for the UHS amendments. Consequently, there was no proposed action pending at the same time as the UHS amendments for the Staff to possibly segment away from the UHS EA.

6.10 Second, even if there was a proposed action, there is no interdependency; the UHS amendments were not interdependent with any prior actions. Certainly, the 2002 license renewal was not dependent upon the UHS amendments given that the UHS amendments were not even contemplated until a dozen years after the renewed license was issued. Further, the EPU was not dependent on the UHS amendments, nor vice versa. As Staff testified, the EPU EA did predict a small temperature increase in average UHS temperatures, but that increase was expected to remain below the prior UHS temperature limit of 100 °F. Consequently, the UHS amendments were not proposed, or known to the Staff to be contemplated, at the time of the EPU.

6.11 Similarly, as discussed above, the UHS amendments were not a result of the EPU. The Staff and FPL demonstrated that, because of fossil Unit 2's placement into a non-power use, the total thermal heat load discharged into the CCS decreased after the EPU. Thus the EPU did not result in the need for the UHS amendments. Rather, as explained above, the unlikely combination of events that occurred in the summer of 2014 necessitated FPL's request for the UHS amendments. Supervening events (e.g., the low rainfall and unique algal bloom)

were not predicted at the time of the EPU and thus did not serve as an impetus for the UHS amendments. They are therefore two otherwise independent actions; not interdependent actions. Moreover, the fact that the EPU and UHS amendments may be compatible does not necessitate their joint consideration for NEPA purposes. See *Sierra Club v. Callaway*, 499 F.2d at 987; *Kleppe v. Sierra Club*, 427 U.S. at 408–414. Therefore, the EPU and UHS amendments were not interdependent such that it would be unwise or irrational to consider them separately.

6.12 In sum, there were no proposed actions interdependent with the UHS amendments at the time the Staff review FPL's request. Consequently, the Staff did not impermissibly segment the UHS EA from any other NEPA analysis.

B. Reliance on State Actions

1. Legal Standards

6.13 NEPA requires federal agencies to weigh the benefits of a proposed action against the detrimental effects on the environment. *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 372 (1989).

6.14 An agency may not abdicate its NEPA responsibility to weigh the benefits and environmental costs of an action on the basis of another agency's certification that particular environmental standards are met. *Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n*, 449 F.2d 1109, 1123 (D.C. Cir. 1971); see also *North Carolina v. FAA*, 957 F.2d 1125, 1129-30 (4th Cir.1992) (agency does not satisfy NEPA "by simply relying on another agency's conclusions about a federal action's impact on the environment"). The agency with NEPA authority must balance the benefits of an action against its environmental costs, despite compliance with another agency's standards. *Id.* at 1123.

6.15 Similarly, an agency may not delegate its consideration of environmental impacts by conditioning the action on the subsequent approval or consultation of another agency. *State*

of Idaho By & Through Idaho Pub. Utilities Comm'n v. I.C.C., 35 F.3d at 595-96. The use of license conditions cannot substitute the comprehensive examination of environmental impacts required by NEPA at the time the licensing decision is made. *Id.*

6.16 NRC's regulations implementing NEPA require the Staff to give consideration in EISs to "compliance with environmental quality standards and requirements that have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection." 10 C.F.R. § 51.71(d), § 51.90. "The environmental impact of the proposed action will be considered in the analysis with respect to matters covered by environmental quality standards and requirements irrespective of whether a certification or license from the appropriate authority has been obtained. 10 C.F.R. § 51.71(d).

6.17 In the past, Licensing Boards have upheld the Staff's reliance on state actions and requirements, where the Staff has independently assessed the work of these other agencies and independently considered the impacts of such actions or requirements.³⁵ For example, one Board considering a CoC issued by the State of Florida reasoned that given

the thoroughness and professionalism of the process used by the State of Florida in developing and issuing the COC, involving such entities as the FDEP, SWFWMD, USACE, [the] Administrative Law Judge....it is realistic and reasonable to expect that the state and local agencies will make sure that these monitoring and mitigation measures will be adequately implemented and enforced in a timely fashion.

Progress Energy Florida, Inc. (Levy County Nuclear Power Plants, Units 1 and 2), LBP-13-14, 77 NRC 107, 196 (2013). The Board found that the NRC Staff's testimony and the FEIS' discussion of the COC and its monitoring and mitigation requirements demonstrated that the "NRC Staff independently and critically assessed the work of the FDEP, SWFWMD, and other agencies." *Id.* at 197.

6.18 Similarly, another Board stated that

³⁵ This is the case even though the Board noted that "the COC and its various conditions imposing monitoring and mitigation are not enforceable by NRC." 77 NRC 107 at 197.

although the NRC Staff relied on [state] water rights applications and permits...a significant extent in determining that the environmental impacts of the proposed project... the NRC Staff did not place complete or undue reliance on the [state] analysis in making that determination. In addition to numerous references to the NRC Staff's generic assessments of the impacts to groundwater, including consumptive use, of ISL projects in general, there are also many examples in the FSEIS of the NRC Staff's analysis of... impacts above and beyond the [state]s water rights permit application.³⁶

Powertech USA, Inc. (Dewey-Burdock in Situ Uranium Recovery Facility), LBP-15-16, 81 NRC 618, 685-86 (Apr. 2015). Consequently, the Staff may rely on another agency's requirements or actions as long as the Staff independently assesses the work done by other agencies and examines the impacts of those actions.

2. Analysis

6.19 We find that the Staff reasonably relied on the State's requirements that FPL monitor and mitigate conditions in the CCS to protect the Biscayne Aquifer in reaching its NEPA conclusions on the UHS LAR. The Staff did not abdicate its NEPA responsibilities; instead, the Staff independently assessed the work of the State agency in making its FONSI.

6.20 Notably, the State made no findings with respect to the UHS license amendments. Instead, the State ensures that its groundwater resources are protected through its authorization process. Therefore, the NRC could not and did not rely on any state finding in determining that there were no significant impacts associated with the UHS license amendments.

6.21 Instead, the NRC Staff considered the independent State actions as they related to the CCS to determine foreseeable conditions and evaluate the possible impacts of the UHS license amendments in light of FPL's compliance with State orders. (Ex. NRC-009 at 44,468-69).

³⁶ *But see Crow Butte Res., Inc.* (in Situ Leach Facility, Crawford, Nebraska), LBP-15-11, 81 NRC 401, 440 (Mar. 2015) ("[t]o the extent the NRC Staff intends to rely on state permits or other non-NEPA documents for its discussion of the environmental impacts of disposal of ISL wastewater and selenium constituents, there is at least a genuine dispute as to whether this approach will satisfy NEPA's "hard look" requirement, especially considering that Crow Butte has not affirmatively stated that land application of ISL wastewater is off the table").

6.22 In particular, the Staff considered that the State was seeking to require FPL to proactively mitigate salinity within the CCS as part of a consent agreement. (Ex. NRC-001 at 19-21, 28-29, 44). The Staff testified that at the time of its UHS LAR review, FPL was anticipating the State to require FPL to pump 14 MGD from the Upper Floridan Aquifer into the CCS. (Ex. NRC-001 at 55-56). Consequently, the Staff testified that one consideration in determining that the amendments would have no impact was that the State was already directing FPL to address the salinity issue. (Ex. NRC-001 at 45; Tr. at 550-552). The State's anticipated order for the 14 MGD withdrawal and its effects were discussed in the EA. (Ex. NRC-009 at 44,468).

6.23 The State requires FPL to monitor the effects of the CCS on groundwater, and take mitigation measures based on the results of the monitoring.³⁷ (Ex. FPL-028; Ex. FPL-001 at 25-28; Ex. NRC-033; Ex. NRC-001 at 20). As a result of monitoring, the State entered into consultation with FPL in 2013, which culminated with the Administrative Order in December of 2014. (Ex. FPL-001 at 36; INT-004). The Administrative Order requires FPL to abate the westward movement of hypersaline water from the CCS, reduce salinity in the CCS, and develop a salinity management plan. (Ex. INT-004 at 6-7; Ex. FPL-001 at 36-37). Among options listed in the order to comply with its requirements were the construction of the Floridan Aquifer wells and use of the L-31 canal to reduce salinity in the CCS. (INT-004 at 6). FPL testified that this order was not in effect at the time of hearing because it was challenged by other parties. (Ex. FPL-001 at 37).

6.24 The Staff testified that it relied on the State's actions, in particular, the State's authorization process, when considering the UHS LAR, since the State is tasked with ensuring that these resources are protected. (Tr. at 473-74). For instance, FPL's authorization request for its Floridan withdrawals required FPL to demonstrate that surface water and groundwater

³⁷ FPL and the Staff testified that in 1972, FPL entered into an agreement with the State to address the operation and impacts of the CCS, which was supplemented a fifth time in 2009. (Ex. NRC-033; Ex. NRC-001 at 19; Ex. FPL-001 at 25). The State also issued "Conditions of Certification" ("CoCs") to FPL under the State's Power Plant Siting Act, with the current CoCs last revised in March of 2015.

resources will not be significantly impacted by the withdrawals. (Ex. FPL-001 at 48-50; Ex. FPL-030). As discussed above, FPL had to demonstrate that its consumptive use permit for its L-31 canal withdrawals would not cause harmful saltwater intrusion. (Ex. FPL-037 at 17). Additionally, as discussed above, FPL's emergency authorizations restrict the amount of water FPL may withdraw from the L-31 canal in order to limit its impact to the canals primary uses. (Ex. FPL-001 at 52-53). Moreover, as discussed above, FPL testified that the additions of the Floridan and L-31 withdrawals into the CCS will mitigate saltwater intrusion. (Ex. FPL-001 at 45, 54). Likewise, the Staff analyzed the potential addition of water and concluded that saltwater intrusion would be mitigated.

6.25 For these reasons, we find that the Staff's reliance on the State's requirements in reaching its NEPA conclusions was reasonable. In sum, the Staff independently considered the potential State actions in its review and discussed them in the EA. The Staff reasonably expected that FPL would abide by the State's order and the action would occur.

C. Legal Effect of State Recommended Order

6.26 Finally, the Board asked the parties to brief the legal effect of a February 15, 2016 Recommended Order from an administrative proceeding ("Recommended Order").³⁸

6.27 The Recommended Order recommended that the DEP rescind or amend the Administrative Order. Recommended Order at 31.

1. Legal Standards

6.28 The February 15, 2016, Recommended Order is not a final decision. The Recommended Order states that:

All parties have the right to submit written exceptions within 15 days from the date of this Recommended Order. Any exceptions to this Recommended Order should be filed with the agency that will issue the Final Order in this case.

(*Id.* at 31).

³⁸ See *infra* at n. 7 (discussing FPL's notification and related Board orders).

6.29 The Secretary of FDEP will consider both the Recommended Order and any exceptions filed by the parties before entering a final order. Fla. Stat. §§ 120.57(1)(b), (k) (2016); Fla. Admin. Code R. 28-106.217.

6.30 An agency may reject or modify findings of fact in a Recommended Order if it first determines that: (1) “the findings of fact were not based upon competent substantial evidence” or (2) “the proceedings on which the findings were based did not comply with essential requirements of law.” Fla. Stat. § 120.57(1)(l) (2016).

6.31 Further, “the agency in its final order may reject or modify the conclusions of law over which it has substantive jurisdiction and interpretation of administrative rules over which it has substantive jurisdiction.” *Id.*

2. Analysis

6.32 The State’s Recommended Order does not undermine the Staff’s assumptions or conclusions in the EA. First, the Staff’s understanding is that the Recommended Order is not final. Both FPL and the State have filed exceptions to the Recommended Order. Florida Power & Light Company’s Motion to Controvert Officially Noticed Recommended Order at 6. Ultimately, the State environmental agency may reject or modify either the findings of fact, the conclusions of law, or both, in its final order. Fla. Stat. § 120.57(l)(1) (2016).

6.33 Second, the fact that the Administrative Order may be rescinded or amended does not undermine the EA’s conclusions. The Recommended Order does not change the fact that the UHS amendments will not increase salinity in the CCS, nor significantly impact saltwater intrusion. Further, FPL is still able to maintain lower salinity levels for summer 2016 because of its L-31 canal withdrawal authorization.

6.34 Moreover, the UHS EA noted that FPL *anticipated* the State ordering it to inject the 14 MGD Floridan Aquifer withdrawals into the CCS. (Ex. NRC-009 at 44,468). Thus, the EA’s conclusion that the State actions would be beneficial was couched as a foreseeable

possibility, not a certainty. “NEPA does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts.” *Louisiana Energy Servs.*, CLI-05-20, 62 NRC at 536 (emphasis in original). Additionally, the Administrative Order did not require any one particular mitigation strategy. Rather, it provided a number of suggested options for mitigation, including the Floridan Aquifer withdrawals. FPL decided that it would pursue the option to withdrawal water from the Floridan Aquifer. The EA’s discussion of the Floridan Aquifer withdrawals was, therefore, a discussion of the strategy FPL anticipated it would use. Therefore, the EA’s conclusion regarding the State’s actions was a proper estimate of a reasonably foreseeable cumulative impact.

6.35 Even if the Administrative Order is rescinded, there is no reason to believe that the State will not again require FPL to mitigate CCS conditions. The Fifth Supplemental Agreement and the CoCs require FPL to take mitigative actions when the State finds it necessary. The State found mitigation necessary in 2013, which culminated in the Administrative Order. Thus, the State has already made the finding that the CCS is harming groundwater resources and that FPL must mitigate this harm. The CoCs and the Fifth Supplemental Agreement require FPL to work with the State to mitigate the impacts of the CCS once the State has found mitigation is necessary. Consequently, by operation of the CoCs and Fifth Supplemental Agreement, FPL is required to mitigate conditions in the CCS now that the State found the CCS is harming groundwater resources. Given that the State has already found groundwater resources are being harmed, it is likely that FPL will be required to mitigate the effects of the CCS, despite the possibility that this particular administrative order may be rescinded. *U.S. Dep’t of Energy* (High Level Waste Repository), CLI-09-14, 69 NRC 580, 606 (June 30, 2009) (“adjudicatory bodies presume, absent strong and concrete evidence otherwise, that government agencies and their employees will do their jobs honestly and properly”). Therefore, we find that, despite the Recommended Order, FPL is still required to mitigate the effects of the CCS on groundwater resources.

6.36 Lastly, the administrative judge made his recommendation after concluding that the Administrative Order did not do enough to abate the CCS' impact on the freshwater-saltwater interface, as required by law. Consequently, whether the Administrative Order is rescinded or amended due to the Recommended Order, it is reasonably certain that the State will require mitigation that is more beneficial than what the Staff anticipated in the EA. At the very least, the State is not likely, nor is it legally able, to simply abandon its responsibility to prevent harm to groundwater resources after the administrative judge recommended that the State strengthen its efforts. That the Recommended Order may lead to future mitigation different from the 14 MGD Floridan Aquifer withdrawals is of no import. FPL is required to mitigate the effects of the CCS and the EA analyzed the impacts of the anticipated mitigation strategy at the time of the Staff's review. Therefore, we conclude that the Recommended Order does not undermine or alter the EA's conclusions, nor the likelihood of FPL's required mitigation.

VII. CONCLUSIONS OF LAW

A. Conclusions of Law With Respect to Contention 1

7.1 The Board has considered all of the evidence presented by the parties on Contention 1. Based upon a review of the entire record in this proceeding and the proposed findings of fact and conclusions of law submitted by the parties, and based upon the findings of fact set forth above, which are supported by reliable, probative and substantial evidence in the record, the Board has decided all matters in controversy concerning this contention and reaches the following conclusions:

7.2 We conclude that the Staff's decision to prepare an EA comports with NEPA. The UHS license amendment request is not an action that requires an EIS to be prepared under 10 C.F.R. § 51.20(a). Therefore, the Staff reviewed the application to determine whether the action could be categorically excluded or whether an EA should be prepared. The Staff determined that an EA should be prepared given the presence of the American crocodiles. (Tr.

at 348). Doing so is consistent with NEPA and NRC's implementing regulations (Ex. NRC-028 at B-1, B-8 — B-14; Ex. NRC-001 at 34-35).

7.3 We conclude that the Staff's EA met the procedural requirements in 10 C.F.R. Part 51. The EA briefly provided sufficient analysis for determining whether to prepare an EIS or a FONSI. See 10 C.F.R. § 51.14(a). The EA properly identified the proposed action, and included a brief discussion of (1) the need for the proposed action, (2) alternatives to the proposed action, and (3) the environmental impacts of the proposed action and alternatives. See 10 C.F.R. § 51.30(a)(1)(i)-(iii). Further, the EA properly listed the agencies and persons consulted, and identified sources used to prepare the EA. See 10 C.F.R. § 51.30(a)(2). Therefore, the EA was sufficient to serve its purpose of providing a sufficient basis for the appropriate NRC Staff Director to make a determination whether to prepare an EIS or a FONSI. See 10 C.F.R. § 51.31(a).

7.4 We conclude that the Staff's use of incorporation by reference comports with NEPA. Both the CEQ regulations and the NRC's Part 51 regulations allow incorporation by reference. Given the short and concise nature of an EA, it was appropriate for the Staff to refer to other analyses which provided detailed information. For example, to assess potential impacts to crocodiles within the CCS, the Staff performed a biological assessment (BA) and incorporated it into the EA. (Ex. NRC-010; NRC-001 at 37). The Staff also incorporated and relied on past environmental reviews of Turkey Point in its EA. (Ex. NRC-009; Tr. at 517) and provided several other reference documents in the EA that discuss groundwater impacts from the operation of Turkey Point and the CCS.

7.5 CASE's concern is that the EA cannot import the previous environmental analyses without considering subsequent developments at the site. *Turkey Point*, CLI-15-25, 82 NRC __ (slip op. at 14); LBP-15-13, 81 NRC at 471. However, the Staff did not simply import the prior analyses. The Staff's EA built upon the imported prior analyses and considered subsequent developments at the site, as evidenced by the UHS EA's characterization of the

CCS as recently becoming hot and hypersaline (Ex. NRC-009). The Staff appropriately used existing analyses to help provide an adequate baseline of conditions at the plant.

7.6 We conclude that the Staff's EA adequately addressed the impact of increased temperature and salinity in the CCS on saltwater intrusion arising from migration out of the CCS. As discussed, the incorporated documents provide detail on the current and historical issue of hypersaline water migrating out of the CCS and into the Biscayne Aquifer. The Staff's rationale for why the amendments will not impact the CCS beyond what is contained in the incorporated documents is discussed in the EA.

7.7 Moreover, Staff's NEPA review was reasonable. The Staff was not required to engage in any worst case scenarios. The Staff addressed impacts that were reasonably foreseeable – not remote and speculative. *See, e.g., Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973). "NEPA does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts." *Louisiana Energy Servs.*, CLI-05-20, 62 NRC at 536 (emphasis in original).

7.8 We conclude that the Staff's EA adequately addressed the impact on saltwater intrusion from increased temperature and salinity in the CCS and from the withdrawal of fresh water from surrounding aquifers to mitigate conditions within the CCS. CASE presented no factual evidence to call into the question the Staff's conclusions in the UHS EA. Moreover, the Staff was not required to include a discussion on withdrawals from the L-31 canal, what was at the time an unlikely possibility. Only impacts "which are shown to have some likelihood of occurring" need NEPA review. *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB- 455, 7 NRC 41, 48 (1978).

7.9 After consideration of all relevant evidence in the record, the Board finds that the NRC Staff has met its burden of demonstrating that the Staff's EA for the UHS license amendments is adequate under NEPA. We therefore affirm that the Staff's environmental

review, and its EA, comply with the requirements of NEPA, and we hereby resolve Contention 1 in favor of the Staff and FPL.

B. Conclusions of Law With Respect to the Legal Issues Raised by the Board

7.10 We conclude that there was no improper segmentation. The Staff did not impermissibly segment the UHS amendments and any other action because there was no interdependent, proposed action at the time of the Staff's review of the UHS LAR. Further, the UHS amendments were not interdependent with any prior actions. The EPU EA did predict a small temperature increase in average CCS temperatures, but that increase was expected to remain below the prior UHS temperature limit of 100 °F. (Ex. NRC-022 at 20,062; Tr. at 385-88).

7.11 The fact that supervening events (e.g., the low rainfall and unique algal bloom) were not predicted, let alone that they would require the UHS amendments, does not make the UHS amendments an adjunct of the EPU. *Kerr-McGee*, LBP-84-42, 20 NRC at 1314. The fact that the EPU and UHS amendments may be compatible or related does not necessitate their joint consideration for NEPA purposes. See *Sierra Club v. Callaway*, 499 F.2d at 987; *Kleppe v. Sierra Club*, 427 U.S. at 408-414.

7.12 We conclude that to the extent the Staff relied on state actions (e.g., water withdrawals), the Staff did not abdicate its NEPA responsibilities. *Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n*, 449 F.2d at 1123. The State actions were separate from the action triggering the NRC's NEPA review (i.e., the UHS license amendments). The Staff did not delegate its consideration of impacts to the State. *State of Idaho By & Through Idaho Pub. Utilities Comm'n v. I.C.C.*, 35 F.3d at 595-96. The State made no findings with respect to the UHS license amendments and thus the NRC could not and did not rely on any such finding in determining that there were no significant impacts associated with the UHS license amendments. Instead, the NRC Staff considered the independent State actions as they related to the CCS to determine foreseeable conditions and evaluate the possible impacts of the UHS

in light of FPL's compliance with State orders. (Ex. NRC-009 at 44,468-69). It was reasonable for the Staff to believe that FPL would abide by the State's order and the action would occur. See *Levy Cty.*, LBP-10-20, 72 NRC at 596 ("[a]ll licensees are required to follow the law all of the time. Indeed, we generally assume that they will do so").

7.13 We also conclude that the State's Recommended Order does not undermine the Staff's assumptions or conclusions in the EA. First, we note that the Recommended Order is not final. Both FPL and the State have filed exceptions to the Recommended Order. Florida Power & Light Company's Motion to Controvert Officially Noticed Recommended Order at 6. Ultimately, the State environmental agency may reject or modify either the findings of fact, the conclusions of law, or both, in its final order. Fla. Stat. § 120.57(l)(1) (2016). Consequently, the Administrative Order may very well remain in place.

7.14 Second, the fact that the Administrative Order may be rescinded or amended does not undermine the EA's conclusions. The Recommended Order does not change the fact that the UHS amendments will not increase salinity in the CCS, nor significantly impact saltwater intrusion. The lack of impacts from the amendments is not dependent on the State's actions. Further, FPL is still able to maintain lower salinity levels for summer 2016 because of its L-31 withdrawal authorization.

7.15 Moreover, the EA noted that FPL *anticipated* the State ordering it to inject the 14 MGD Floridan Aquifer withdrawals into the CCS. (Ex. NRC-009 at 44,468). Thus, the EA's conclusion that the State actions would be beneficial was couched as a foreseeable possibility, not a certainty. "NEPA does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts." *Louisiana Energy Servs.*, CLI-05-20, 62 NRC at 536(emphasis in original). Therefore, the EA's conclusion regarding the State's actions was a proper estimate of a reasonably foreseeable cumulative impact.

7.16 Even if the Administrative Order is rescinded, there is no reason to believe that the State will not again require FPL to mitigate CCS conditions. The Fifth Supplemental

Agreement and the CoCs require FPL to take mitigative actions where monitoring has shown that mitigation is necessary. It is likely that the State will require FPL to take mitigative actions, given that the State has already deemed it necessary in the Administrative Order.

7.17 Lastly, the administrative judge made his recommendation after concluding that the Administrative Order did not do enough to abate the CCS' impact on the freshwater-saltwater interface, as required by law. Consequently, whether the Administrative Order is rescinded or amended due to the order, it is reasonably certain that the State will require mitigation that is still beneficial to the environment, as Staff concluded in the EA. Therefore, we conclude that the Recommended Order does not undermine or alter the EA's conclusions, nor the likelihood of FPL's required mitigation.

Respectfully submitted,

Signed (electronically) by

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
FLORIDA POWER & LIGHT CO.)	Docket No. 50-250-LA
)	50-251-LA
(Turkey Point Nuclear Generating)	
Units 3 and 4))	

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305 (revised), I hereby certify that copies of the foregoing "NRC STAFF'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW CONCERNING CONTENTION 1" dated March 28, 2016 have been filed through the Electronic Information Exchange, the NRC's E-Filing System, in the above-captioned proceeding, this 28th day of March, 2016.

/Signed (electronically) by/

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