

November 10, 2015

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	Docket No. 50-250-LA
Florida Power & Light Company	)	50-251-LA
	)	
(Turkey Point Units 3 and 4)	)	ASLBP No. 15-935-02-LA-BD01

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**FLORIDA POWER & LIGHT COMPANY'S  
INITIAL STATEMENT OF POSITION**

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Steven C. Hamrick  
 Florida Power & Light Company  
 801 Pennsylvania Avenue, N.W. Suite 220  
 Washington, DC 20004

William S. Blair  
 Erin Walkowiak  
 Florida Power & Light Company  
 700 Universe Blvd.  
 Juno Beach, Florida 33408

COUNSEL FOR  
 FLORIDA POWER & LIGHT COMPANY

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**I. INTRODUCTION**

Pursuant to 10 C.F.R. § 2.1207(a)(1) and the Licensing Board’s Initial Scheduling Order, dated May 8, 2015, Florida Power & Light Company (“FPL”) hereby submits this Initial Statement of Position on CASE Contention 1. This Initial Statement of Position is supported by direct testimony from FPL witnesses and the exhibits submitted concurrently. For the reasons set forth below, the NRC Staff’s Environmental Assessment (“EA”) satisfies the requirements of the National Environmental Policy Act (“NEPA”). CASE Contention 1 should be resolved in favor of FPL and the NRC Staff.

**II. PROCEDURAL BACKGROUND**

This proceeding pertains to FPL’s License Amendment Request to amend certain Technical Specifications (“TS”) for Turkey Point Nuclear Generating Units Nos. 3 and 4 (“Turkey Point”) to increase the ultimate heat sink (“UHS”) water temperature limit specified in TS 3.7.4 from 100°F to 104°F, add a surveillance requirement to monitor the UHS water temperature once per hour whenever the temperature exceeds 100°F, and increase the frequency

of a component cooling water heat exchanger performance test.<sup>1</sup> In the summer of 2014, environmental conditions, including extraordinary algae growth in the Turkey Point Cooling Canal System (“CCS”) and unseasonably dry weather, among other factors, resulted in UHS temperatures approaching the 100°F TS limit. Consequently, on July 10, 2014, FPL requested the NRC to increase the UHS temperature limit in TS 3.7.4. FPL did not submit an Environmental Report along with its amendment request, and instead invoked a categorical exclusion from NEPA for amendments that change requirements for facility components that do not involve: (1) significant hazards consideration; (2) a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite; and (3) a significant increase in individual or cumulative occupational radiation exposure.<sup>2</sup>

The NRC opted not to rely upon the categorical exclusion and published an EA for the license amendment in the *Federal Register* on July 31, 2014.<sup>3</sup> The EA concluded that the UHS license amendment would not have a significant environmental impact and so it included a formal finding of no significant impact for the NRC’s action. Having also determined that the amendment involved no significant hazards considerations and the criteria for exigent consideration were met, the NRC issued the amendment on August 8, 2014.<sup>4</sup>

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<sup>1</sup> Letter from M. Kiley, FPL to NRC Document Control Desk “License Amendment Request No. 231, Application to Revise Technical Specifications to Revise Ultimate Heat Sink Temperature Limit,” dated July 10, 2014 (ADAMS Accession No. ML14196A006) (Exhibit FPL-008).

<sup>2</sup> See 10 C.F.R. § 51.22(c)(9).

<sup>3</sup> Florida Power & Light Company, Turkey Point Units 3 and 4: Environmental Analysis and Finding of No Significant Impact, 79 Fed. Reg. 44,464 (July 31, 2014) (Exhibit NRC-009).

<sup>4</sup> Letter from A. Klett, NRC to M. Nazar, FPL, Turkey Point Nuclear Generating Units Nos. 3 and 4 – Issuance of Amendments under Exigent Circumstances Regarding Ultimate Heat Sink and Component Cooling Water Technical Specifications (TAC Nos. MF4392 and MF4393) dated August 8, 2014 (ADAMS Accession No. ML14199A107). (Exhibit NRC-006).

On August 14, the NRC published a notice of issuance of the license amendment and a supplemental notice of opportunity for hearing in the *Federal Register*.<sup>5</sup> In response to the NRC’s Hearing Notice, CASE requested a hearing, submitting four proffered contentions.<sup>6</sup> FPL and the NRC Staff opposed CASE’s hearing request.<sup>7</sup> CASE filed a reply on November 17, 2014.<sup>8</sup> On March 23, 2015, the Licensing Board issued LBP-15-13, ruling that CASE had demonstrated standing and admitting CASE Contention 1 for hearing.<sup>9</sup>

### **III. APPLICABLE LEGAL STANDARDS**

#### **A. National Environmental Policy Act**

NEPA requires agencies to take a “hard look” at and disclose the environmental impacts of a proposed action.<sup>10</sup> An EA is a concise public document that briefly provides sufficient evidence and analysis for determining whether to prepare an environmental impact statement or instead issue a finding of no significant impact.<sup>11</sup> Unlike an environmental impact statement, which is subject to a number of specified regulatory requirements, there is no “universal formula for what an EA must contain and consider.”<sup>12</sup> The level of detail required “depends upon the

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<sup>5</sup> Florida Power & Light Company; Turkey Point, Units 3 and 4; License Amendment, Issuance, Opportunity to Request a Hearing, and Petition for Leave to Intervene, 79 Fed. Reg. 17,689 (Aug. 14, 2014) (“Hearing Notice”).

<sup>6</sup> Citizens Allied for Safe Energy, Inc. Petition to Intervene and Request for a Hearing (Oct. 14, 2014).

<sup>7</sup> FPL’s Answer to Citizens Allied for Safe Energy, Inc.’s Petition to Intervene and Request for a Hearing (Nov. 10, 2014) (“FPL Answer”); NRC Staff’s Answer to Citizens Allied for Safe Energy, Inc.’s Petition for Leave to Intervene and Request for Hearing (Nov. 10, 2014) (“NRC Staff Answer”).

<sup>8</sup> CASE Reply to FPL and to NRC Staff Answers to Its Petition to Intervene and Request for a Hearing (Nov. 17, 2014).

<sup>9</sup> *Florida Power & Light Company* (Turkey Point Units 3 and 4), LBP-15-13, 81 NRC \_\_ (March 23, 2015).

<sup>10</sup> *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989).

<sup>11</sup> 40 C.F.R. § 1508.9.

<sup>12</sup> *Friends of Congaree Swamp v. Fed. Highway Admin.*, 786 F.Supp.2d 1054, 1062 (D.S.C. 2011).

nature and scope of the proposed action.”<sup>13</sup> An EA requires less depth of consideration and less detail than an environmental impact statement.<sup>14</sup>

1. *NEPA’s Rule of Reason*

Even in the context of a full environmental impact statement, the NEPA “hard look” requirement is subject to a “rule of reason.”<sup>15</sup> Under this standard, an “agency’s environmental review, rather than addressing every impact that could possibly result, need only account for those that have some likelihood of occurring or are reasonably foreseeable.”<sup>16</sup> Further, NEPA review documents should be “analytic rather than encyclopedic,” and “kept concise” and “no longer than absolutely necessary to comply with NEPA and these regulations.”<sup>17</sup> The NRC’s licensing boards do not sit to “flyspeck” an EA or to add minor details or nuances to the analysis.<sup>18</sup> It is enough that the EA discusses the significant aspects of the probable environmental impacts of the proposed action.<sup>19</sup>

Similarly, a NEPA review need not be exactly precise. As the Commission has explained, NEPA “does not call for certainty or precision, but an estimate of anticipated (not unduly speculative) impacts.”<sup>20</sup> When faced with uncertainty, NEPA only requires “reasonable

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<sup>13</sup> *California v. Block*, 690 F.2d 753, 761 (9th Cir.1982)

<sup>14</sup> *See Pa’ina Hawaii, L.L.C.*, CLI-10-18, 72 NRC 56, 75 (2010).

<sup>15</sup> *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 767-69 (2004); *see also Louisiana Energy Servs.* (National Enrichment Facility), LBP-06-8, 63 NRC 241, 258-59 (2006) (*citing Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)).

<sup>16</sup> *LES*, LBP-06-8, 63 NRC at 258-59 (*citing Shoreham*, ALAB-156, 6 AEC at 836).

<sup>17</sup> 40 C.F.R. § 1502.2(a), (b); *see also Private Fuel Storage L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348 n. 25 (2002).

<sup>18</sup> *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-04, 53 NRC 31, 71 (2001).

<sup>19</sup> *Shoreham*, ALAB-156, 6 AEC at 836.

<sup>20</sup> *Louisiana Energy Servs.* (Nat’l Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005).

forecasting.”<sup>21</sup> There is no requirement to use the best scientific methodology, and NEPA should be construed in the light of reason if it is not to demand virtually infinite study and resources.<sup>22</sup>

For this reason, NEPA’s “hard look” uses the best information available at the time the assessment is performed.<sup>23</sup> It represents a “snapshot” in time and the NRC need not “wait until inchoate information matures into something that later might affect” the review.<sup>24</sup> The Commission has stated that “while there ‘will always be more data that could be gathered [agencies] must have some discretion to draw the line and move forward with decisionmaking.’”<sup>25</sup>

2. *Supplementation of NEPA Documents is Required When New Information Presents a Seriously Different Picture of Environmental Impacts*

Agencies “need not supplement an EIS every time new information comes to light after the EIS is finalized,” which “would render agency decisionmaking intractable, always awaiting updated information only to find the new information outdated by the time a decision is made.”<sup>26</sup> Supplementation is not required unless there is a major federal action yet to occur and “new information is sufficient to show that the remaining action will affect the quality of the human environment in a significant manner or to a significant extent not already considered.”<sup>27</sup> As the

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<sup>21</sup> *Scientists’ Inst. for Pub. Info., Inc. v. AEC*, 481 F.2d 1079, 1092 (D.C. Cir. 1973).

<sup>22</sup> *Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station)*, CLI-10-11, 71 NRC 287, 315 (2010) (quoting *Natural Resources Defense Council, Inc. v. Hodel*, 865 F.2d 288, 294 (D.C. Cir. 1988)).

<sup>23</sup> *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 341 (2012).

<sup>24</sup> *Luminant Generation Company, LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4) CLI-12-7, 75 NRC 379, 391-92 (2012) (citing *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989)).

<sup>25</sup> *Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station)*, CLI-10-11, 71 NRC 287, 315 (2010) (citing *Town of Winthrop v. Federal Aviation Administration*, 535 F.3d 1, 11 (1st Cir. 2008)).

<sup>26</sup> *Marsh*, 490 U.S. at 374.

<sup>27</sup> *Id.* (internal quotations omitted).

Commission has put it, in order to warrant supplementation, new information must paint a “seriously different picture of the environmental landscape.”<sup>28</sup>

Under the so-called “Sholly Amendment” to the Atomic Energy Act, the NRC Staff may issue an amendment to a reactor operating license notwithstanding the pendency of a hearing if it determines that the amendment “involves no significant hazards consideration.”<sup>29</sup> NRC regulations implementing this provision state that in such a case, “the amendment *will be effective on issuance*, even if adverse public comments have been received and even if an interested person . . . has filed a request for a hearing.”<sup>30</sup> Because the license amendment at issue in this proceeding was “effective” on the date it was issued, that date controls as the point in time at which there was no longer a federal action to occur for purposes of a *Marsh* supplementation analysis. For this reason, any development that occurred after the license amendment was issued is not relevant to the Board’s review of the sufficiency of the NRC Staff’s compliance with NEPA.<sup>31</sup> Nevertheless, the Licensing Board maintains authority to review the NRC’s EA, based on information available at the time the NRC took its action.

## **B. The Board’s Review of the EA**

In reviewing the EA and the NRC Staff’s compliance with NEPA, the Board may consider the adjudicatory record such that the Board’s decision becomes part of the NEPA record

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<sup>28</sup> *Comanche Peak*, CLI-12-7, 75 NRC at 388-89.

<sup>29</sup> 42 U.S.C. 2239(a)(1)(A).

<sup>30</sup> 10 C.F.R. § 50.91(a)(4) (emphasis added).

<sup>31</sup> FPL acknowledges that the Board in LBP-15-13 stated that the “grant of a license amendment [should] not be considered final agency action until the process has run its course.” LBP-15-13, slip op. at 22. For this reason, FPL’s testimony addresses matters that occurred after the license amendment. As discussed below, the same result should follow regardless, because none of the intervening events have painted a seriously different picture of the environmental impacts of the license amendment.

of decision.<sup>32</sup> In NRC licensing proceedings, “the ultimate NEPA judgments regarding a facility can be made on the basis of the entire record before a presiding officer, such that the [NRC NEPA document] can be deemed amended *pro tanto*.”<sup>33</sup> Therefore, the Board may consider the full record before it, including the testimony and exhibits at the hearing, to conclude that “the aggregate is sufficient to satisfy the agency’s obligation under NEPA” to take a “hard look” at the environmental consequences of issuing the license amendment.<sup>34</sup> This process allows for “additional and a more rigorous public scrutiny” than does the usual circulation for comment.<sup>35</sup> The Commission utilizes this method in its review of an EA as well as of an EIS.<sup>36</sup>

### C. **Burden of Going Forward and Burden of Proof**

An applicant generally has the burden of proof in a licensing proceeding.<sup>37</sup> However, in cases involving NEPA contentions, the burden of proof belongs to the NRC Staff because it, not the applicant, has the responsibility for complying with NEPA.<sup>38</sup> Where the Applicant becomes a proponent of a particular challenged position set forth in a NEPA document, the Applicant shares the burden on that matter.<sup>39</sup>

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<sup>32</sup> *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3) CLI-15-6, 81 NRC \_\_\_, (slip op. at 62-63) (March 9, 2015).

<sup>33</sup> *Louisiana Energy Servs.* (National Enrichment Facility), LBP-05-13, 61 NRC 385, 404 (2005).

<sup>34</sup> *LES*, LBP-06-8, 63 NRC at 286.

<sup>35</sup> *Indian Point*, CLI-15-6, slip op. at 63.

<sup>36</sup> *See e.g., Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509, 526 & n.87 (2008).

<sup>37</sup> 10 C.F.R. § 2.325.

<sup>38</sup> *See, e.g., Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), CLI-83-19, 17 NRC 1041, 1049 (1983).

<sup>39</sup> *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 339 (1996) (citing *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-471, 7 NRC 477, 489 n.8 (1978)), *rev'd on other grounds*, CLI-97-15, 46 NRC 294 (1997).

But while the Staff and applicant have the ultimate burden of proof, “hearings are held on only those issues that an intervenor brings to the fore.”<sup>40</sup> The burden of going forward on any issues that make it to the hearing process is on the intervenor that is pursuing that issue.<sup>41</sup> Thus, the Intervenor maintains a “burden of preserving the scope of its contention.”<sup>42</sup> To satisfy this burden, an intervenor must provide “probative evidence or expert testimony” to support the contentions.<sup>43</sup> In *Oyster Creek*, the Commission approved the Licensing Board’s determination that an intervenor had not met its burden through: (1) testimony of a witness who was not an expert in the relevant field; (2) mere assertions and speculation; and (3) invocation of the applicant’s ultimate burden.<sup>44</sup>

The NRC applies the “preponderance of the evidence” standard to resolve a contention.<sup>45</sup> Thus, if the intervenor carries its burden of going forward, the Board must consider the evidence and testimony and determine whether the NRC Staff and the applicant have shown by the preponderance of the evidence that the NRC Staff’s review was adequate to comply with NEPA.

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<sup>40</sup> See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-05-12, 61 NRC 319, 326 (2005), *aff’d Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403 (2005).

<sup>41</sup> *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 268-69 (2009) (citing *Louisiana Power and Light Co.* (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076, 1093 (1983); *Consumers Power Co.* (Midland Plant, Units 1 and 2), ALAB-123, 6 AEC 331, 345 (1973)).

<sup>42</sup> *PFS*, LBP-05-12, 61 NRC at 326-29.

<sup>43</sup> *Oyster Creek*, CLI-09-7, 69 NRC at 269.

<sup>44</sup> *Id.* at 269-70.

<sup>45</sup> *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-94-6, 39 NRC 285, 301 (1994), *aff’d, Advanced Medical Systems, Inc. v. NRC*, 61 F.3d 903 (6th Cir.1995); see also *Commonwealth Edison Co.* (Zion Station, Units 1 & 2), ALAB-616, 12 NRC 419, 421 (1980).

#### **IV. FPL WITNESSES**

FPL's Initial Written Testimony addresses CASE Contention 1 and is presented by Mr. Steven D. Scroggs, Mr. Peter F. Andersen, and Mr. Jim M. Bolleter.<sup>46</sup> Through the testimony and supporting exhibits, FPL's witnesses demonstrate the NRC Staff's EA is reasonable and reflects a "hard look" at the potential impacts of the UHS license amendment. The testimony is consistent with the NRC's conclusion that the UHS license amendment will have no significant environmental impact.

##### **A. Steven D. Scroggs**

Steve Scroggs is employed as a Senior Director, Project Development at FPL.<sup>47</sup> He currently leads the project development for the Turkey Point Units 6 & 7 new nuclear project and is directing efforts to reduce salinity in the Turkey Point CCS and add operating margin through upgrades to specific plant systems. Mr. Scroggs is an expert in power plant engineering, design, and siting. His testimony addresses the UHS license amendment, the history of the CCS, and the efforts of FPL and state and local regulators to reduce salinity in the CCS, among other topics.

##### **B. Jim M. Bolleter**

Jim Bolleter is employed by Ecology and Environment, Inc. as Operations Manager.<sup>48</sup> He has over 30 years of experience in a wide variety of environmental, coastal, and water resource projects, including: watershed and waterfront planning and design; water and wastewater system studies and design; environmental impact assessment; water quality and wetland restoration; environmental monitoring, permitting, and compliance; and contamination site assessment and remediation. He currently oversees FPL's Uprate Monitoring Program,

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<sup>46</sup> Exhibit FPL-001.

<sup>47</sup> A copy of his professional qualifications statement is attached to Exhibit FPL-002.

<sup>48</sup> A copy of his professional qualifications statement is attached to Exhibit FPL-003.

which tracks saltwater intrusion in the vicinity of the cooling canals. Mr. Bolleter is an expert in ground and surface water monitoring, saltwater intrusion, and environmental assessment. His testimony addresses the scope of saltwater intrusion in the vicinity of Turkey Point, the findings of the Uprate Monitoring Program, and the potential effect of the UHS license amendment on CCS salinity, among other topics.

**C. Peter F. Andersen**

Pete Andersen is employed at Tetra Tech, Inc., as Principal Engineer and Operations Manager at the Alpharetta, GA office.<sup>49</sup> Mr. Andersen performs groundwater modeling and performs assessments of migration of constituents in groundwater. His technical duties include project management, conceptual designs of remedial engineering systems for hazardous waste sites, analysis of subsurface systems using numerical models, evaluation of water supply potential, and prediction of impacts of water supply development. He has been extensively involved in modeling the effects of the CCS and migration of water in the surrounding aquifers for many years. Mr. Andersen is an expert in groundwater hydrology, water resource engineering, groundwater modeling, and groundwater/surface water relationships. His testimony addresses the local groundwater in the vicinity of Turkey Point, the potential effect of the UHS license amendment on CCS salinity, and the potential effect of FPL's groundwater withdrawals on saltwater intrusion, among other topics.

**V. DISCUSSION OF CASE CONTENTION 1**

CASE Contention 1, as admitted by the Board, alleges that the NRC's EA "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) the withdrawal of fresh water from

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<sup>49</sup> A copy of his professional qualifications statement is attached to Exhibit FPL-004.

surrounding aquifers to mitigate conditions within the CCS.” Essentially, the contention alleges that the increase in UHS temperature allowed by the UHS license amendment will lead to an increase in average temperature in the CCS and a resultant increase in CCS salinity. According to the contention, this heightened CCS salinity, in turn, will exacerbate saltwater intrusion to the west (inland) of the CCS both by direct migration out of the CCS and by operation of FPL’s CCS mitigation measures.

**A. Discussion of CASE’s Position Statement**

At the outset, CASE has not met its burden of going forward regarding the impacts of the UHS license amendment on CCS salinity and saltwater intrusion. CASE asserts, with no evidentiary basis, that the amendment will increase average CCS temperatures to approximately 108°F.<sup>50</sup> CASE also speculates that the resulting increases in salinity will be “much higher,” again with no evidentiary support.<sup>51</sup> But instead of offering evidence to meet its burden, CASE simply asks questions, demonstrating its inability to provide probative evidence addressing these issues.<sup>52</sup>

Moreover, CASE has abandoned several additional facets of Contention 1. As admitted, Contention 1 included allegations that FPL’s withdrawals of water (allegedly fresh) from the Biscayne Aquifer and Upper Floridan Aquifer, and of water (allegedly aquifer water) from the L-

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<sup>50</sup> CASE Statement at 19, 21.

<sup>51</sup> *Id.* at 21. Incredibly, CASE attempts to turn the four degree increase in the temperature limit afforded by the license amendment into a fourteen degree increase based on a statement in the Environmental Assessment for the uprate that the water returning to the plant is approximately 70 to 90°F. *Id.* at 25. This inappropriate comparison of typical temperature ranges to the highest permitted, outlier, temperatures demonstrates CASE’s fundamental misunderstanding of the amendment.

<sup>52</sup> *Id.* at 21-26. CASE has utilized the same three techniques recognized in *Oyster Creek* as being insufficient to meet an intervenor’s burden of going forward (non-expert testimony, speculation, and burden-shifting). See *Oyster Creek*, 69 NRC at 269-70.

31 E canal, would exacerbate saltwater intrusion.<sup>53</sup> In its position statement, however, CASE makes this claim only about the Biscayne Aquifer withdrawals, noting (without any support) that “the withdrawal of billions of gallons of freshwater from the Biscayne Aquifer for use in the canals, as authorized by by [sic] the SFWMD over the last few years has exacerbated saltwater intrusion to the west of the CCS.”<sup>54</sup> CASE later identifies the withdrawals from both the Biscayne and the Floridan Aquifers, but makes no assertions regarding their impact.<sup>55</sup> And CASE mentions the L-31 E canal withdrawals, but does not describe their impacts and explicitly admits that “the ramifications of this request are not at issue.”<sup>56</sup> Thus, CASE has made no claim regarding impacts from Floridan withdrawals and the use of L-31 E canal water and has made no supported claim regarding the impacts of the Biscayne Aquifer withdrawals. For these reasons, CASE has not met its burden of going forward with evidence to buttress its contention on the impacts of FPL’s water withdrawals.<sup>57</sup>

Further, as explained in 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,” dated October 19, 2015, CASE raised numerous issues that are beyond the scope of Contention 1 as admitted. As the Board has yet to rule on this motion, FPL’s testimony addresses these out-of-scope matters. In doing so, FPL does not waive its argument that these matters are beyond the scope of Contention 1.

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<sup>53</sup> See LBP-15-13, slip op. at 21, 24.

<sup>54</sup> CASE Statement at 14.

<sup>55</sup> *Id.* at 16, 52.

<sup>56</sup> *Id.* at 57-58.

<sup>57</sup> *Oyster Creek*, 69 NRC at 269.

**B. Assessment of CASE Contention 1**

The testimony of FPL’s witnesses demonstrates that CASE Contention 1 is without merit. The NRC’s EA adequately considered all relevant information in concluding that the UHS license amendment would have no significant environmental impact. Further, FPL’s CCS mitigation activities, which are unrelated to the UHS license amendment, including the addition of water from the Biscayne Aquifer, the Upper Floridan Aquifer, and the L-31 E canal, are intended to mitigate the westward movement of hypersaline water from the CCS. Contrary to CASE’s unsupported assertions, these additions will not cause saltwater intrusion. Further, while circumstances that arose after the publication of the EA and the issuance of the amendment should not be considered when evaluating the NRC’s compliance with NEPA, even if those topics are considered, they do not paint a seriously different picture of the environmental impacts of the NRC’s action. For these reasons, the Board should rule in favor of the NRC Staff and FPL.

**1. *The EA Adequately Assesses the Impact of the UHS License Amendment on CCS Salinity and Surrounding Aquifers***

**a. *Discussion of Existing Environmental Conditions***

FPL’s testimony begins by providing an overview of the history of the CCS, including a discussion of its hydrological properties, the effects of the extended power uprate, and the state-imposed uprate monitoring program.<sup>58</sup> The witnesses describe the factors that lead to high salinity in the CCS and the factors that led to the increasing CCS salinity and temperature in recent years.<sup>59</sup> FPL’s witnesses explain that the presence of saltwater in the surficial Biscayne

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<sup>58</sup> FPL Panel Testimony at Answer (“A”)19-A55. Exhibits FPL-005, FPL-006, and FPL-007 provide illustrative views of the Turkey Point site and CCS.

<sup>59</sup> *Id.* at A24-A26, A93.

Aquifer west of Turkey Point pre-dates the CCS and was documented well inland in the 1950s.<sup>60</sup> This saltwater zone, which underlies a shallow freshwater lens, can move both seasonally and from year to year.<sup>61</sup> The salinity of the CCS is one of many factors that can influence the presence of saltwater in the local surficial waters.<sup>62</sup> But the extent to which each of the factors, including the CCS, has contributed to the saltwater intrusion is not fully established.<sup>63</sup>

FPL's witnesses explain that a Monitoring Plan (the "Uprate Monitoring Plan") was developed with input from the Florida Department of Environmental Protection ("FDEP"), the South Florida Water Management District ("SFWMD"), Miami-Dade County, and FPL, as part of the approval of the uprate.<sup>64</sup> The purpose of the Uprate Monitoring Plan is to provide information to determine the vertical and horizontal effects, and extent, of saline CCS water on existing and projected surface and groundwater resources, and ecological conditions surrounding the Turkey Point Facility.<sup>65</sup> Under this program, FPL has submitted a Comprehensive Pre-Uprate Monitoring Report in 2012, an Annual Post-Uprate Monitoring Report in 2014, and an Addendum to the 2014 report, which included delayed tritium tracer data.<sup>66</sup> Groundwater samples under and immediately adjacent to the CCS indicate the presence of hypersaline CCS water at depth.<sup>67</sup> This denser saltwater can influence the westward movement of saltwater.<sup>68</sup>

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<sup>60</sup> *Id.* at A34, A55; Exhibit FPL-015 (Klein, 1957); *see also* INT-004 (FDEP Administrative Order) at ¶9.

<sup>61</sup> *Id.* at A34; Exhibit FPL-016 (Peters, 2008).

<sup>62</sup> *Id.* at A55, A57-A58.

<sup>63</sup> *Id.* at A55.

<sup>64</sup> *Id.* at A42.

<sup>65</sup> *Id.* at A42.

<sup>66</sup> *Id.* at A43-A52; Exhibits FPL-014, FPL-024, and FPL-025. Tritium is present in the CCS in higher concentrations than in the surrounding environment. For this reason, its presence outside the CCS can be used to help determine whether saline groundwater may be attributable to the CCS.

<sup>67</sup> *Id.* at A46.

<sup>68</sup> *Id.* at A55, A58.

Farther west of the CCS (out approximately 3 miles), CCS water in decreasing concentrations at depth is intermixed with historic marine water that existed in the area groundwater prior to construction of the CCS.<sup>69</sup> However, the inland extent of saltwater intrusion in the area today is less than it was in the 1950s and there have been limited changes in movement observed between the pre-uprate period and the post-uprate period.<sup>70</sup>

The testimony goes on to explain that Turkey Point Units 3 and 4 are licensed under the Florida Electrical Power Plant Siting Act and that a condition of the certification provides that if FDEP, in consultation with the District and the Miami-Dade County, determines that the data from the Monitoring Plan indicates harm or potential harm to the waters of the State, then additional measures would be required to evaluate or to abate such impacts.<sup>71</sup> In 2013, following a review of FPL's Pre-Uprate Monitoring Report, the SFWMD concluded that water from the CCS had migrated outside the geographic boundaries of the CCS and so it initiated consultation with FPL and FDEP.<sup>72</sup> Following this consultation, FDEP issued an Administrative Order in December 2014, which, concluded that "saline water from the CCS has moved westward of the L-31E Canal in excess of those amounts that would have occurred without the existence of the CCS."<sup>73</sup> FDEP, "recognizing that all contributing factors affecting groundwater movement in the South Miami-Dade County region (including the saltwater migration to the west of the CCS) have not been fully established," determined that the CCS is "one of the contributing factors in the western migration of CCS saline water."<sup>74</sup> Accordingly, the FDEP issued the Administrative

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<sup>69</sup> *Id.* at A46, A50, A55.

<sup>70</sup> *Id.* at A49 A50, A55; Exhibit FPL-023 (Figure from 2014 Uprate Monitoring Report- Saltwater Isopleths).

<sup>71</sup> *Id.* at A42.

<sup>72</sup> *Id.* at A59; Exhibit FPL-026 (SFWMD Consultation Letter).

<sup>73</sup> *Id.* at A59-60; Exhibit INT-004 at ¶24.

<sup>74</sup> Exhibit INT-004 at ¶25.

Order in order to help prevent further harm to the waters of the State.<sup>75</sup> The Administrative Order requires FPL to “reduce and maintain the average annual salinity of the CCS at a practical salinity of 34” within four years.<sup>76</sup>

The NRC’s EA explains that the description of the Turkey Point site and its environs provided in the EA for the Extended Power Uprate license amendment continues to be accurate.<sup>77</sup> A description of the effects of increased temperature in the CCS on salinity and, in turn on local groundwater can be found in the NRC’s EA for the uprate project, which explains that water in the CCS is hypersaline.<sup>78</sup> It went on to explain that under the proposed EPU, the quantity of waste heat discharged would increase the temperature in the CCS and in turn increase its salinity.<sup>79</sup> The NRC then explained that the FDEP’s Conditions of Certification for Units 3, 4, and 5 require groundwater monitoring to characterize environmental conditions at Turkey Point and that if the data indicate an adverse impact to local groundwater, abatement or mitigation would be required.<sup>80</sup> The NRC’s EA for the UHS License Amendment updated this discussion by noting that “FPL also anticipates the FDEP to issue an Administrative Order requiring FPL to install up to six new wells that will pump approximately 14 MGD of water from the Floridan Aquifer into the CCS,” which would “reduce the salinity of the CCS to the equivalent of Biscayne Bay.”<sup>81</sup> FPL’s testimony is consistent with this description and

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<sup>75</sup> *Id.* at ¶25.

<sup>76</sup> *Id.* at ¶37.a.; ¶37.b.; FPL Panel Testimony at A60.

<sup>77</sup> *Id.* at A106; Exhibit NRC-009, 79 Fed. Reg. at 44,465.

<sup>78</sup> *Id.* at A106; Exhibit NRC-023, 77 Fed. Reg. at 20,062.

<sup>79</sup> *Id.* at A106. While the uprate EA anticipated an increase in salinity due to increased thermal load into the CCS, the thermal load has actually been reduced due to the retirement of Unit 2. *Id.* at A26; *see also* Exhibit FPL-009.

<sup>80</sup> *Id.* at A106.

<sup>81</sup> *Id.* at A111.

concludes that the EA accurately describes the conditions in the CCS and the surrounding aquifers.<sup>82</sup>

b. *Impact of the Ultimate Heat Sink Amendment on CCS Salinity*

FPL's witnesses explain that the UHS temperature at the plant intake has not exceeded the previous temperature limit of 100°F since August 2014, the month the UHS license amendment was issued.<sup>83</sup> In fact, temperatures have trended lower in 2015 than in 2014.<sup>84</sup> And FPL's experts explain that, even if the CCS temperatures were to exceed 100°F, as allowed under the UHS amendment, such an increase would be for a limited period of time and would thus have a negligible impact on overall CCS salinity based on water balance calculations.<sup>85</sup> This is consistent with the NRC's EA, which stated that: "[t]emperature increases would also increase CCS water evaporation rates and result in higher salinity levels. This effect would also be temporary and short in duration because salinity would again decrease upon natural freshwater recharge of the system (*i.e.*, through rainfall, stormwater runoff, and groundwater exchange)."<sup>86</sup> The temperature history in the CCS since the issuance of the amendment is also consistent with the NRC's EA, which explained that "the CCS could experience temperatures between 100°F and 104°F at the TS monitoring location near the north end of the system for short durations during periods of peak summer air temperatures and low rainfall. Such conditions may not be experienced at all depending on site and weather conditions."<sup>87</sup>

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<sup>82</sup> *Id.* at A107, A115. The AO as issued did not require FPL to install Upper Floridan wells. However, FPL has chosen to install those wells in order to meet the AO's salinity performance requirement.

<sup>83</sup> *Id.* at A31; *see also* Exhibit FPL-012 (Intake Cooling Water Temperature Record).

<sup>84</sup> *Id.* at A31; *see also* Exhibit FPL-011 (60-Day Canal Peak Temperature Trend 2014 and 2015).

<sup>85</sup> *Id.* at A97-A103.

<sup>86</sup> *Id.* at A108; Exhibit NRC-009, 79 Fed. Reg. at 44,466-44,467.

<sup>87</sup> *Id.* at A108; Exhibit NRC-009, 79 Fed. Reg. at 44,466.

FPL's witnesses note that the hypersalinity of the CCS is only one of numerous factors that contribute to the presence of saltwater west of the CCS.<sup>88</sup> Thus, *if* the UHS license amendment had a greater-than-negligible impact on CCS salinity, then it would affect one of the factors impacting westward movement of hypersaline water. But because the impact of the UHS temperature amendment on CCS salinity is negligible, FPL's witnesses expect it to have no significant impact to groundwater quality.<sup>89</sup>

In his testimony, Mr. Andersen explains that, based on CCS thermal calculations performed for the uprate, a four degree Fahrenheit increase in average CCS temperatures would result in a 5.8 psu increase in salinity.<sup>90</sup> The incremental effect of this 5.8 psu salinity increase would be to increase density by 0.0021 g/cm<sup>3</sup>, thus increasing the hydraulic head at the bottom of a 20 foot canal by 0.04 foot.<sup>91</sup> This 0.04 foot increase in hydraulic head is small, less than half an inch, and well within random natural fluctuations caused by climate, wind, pumping, and CCS operations.<sup>92</sup> But Mr. Andersen explains that even this small value is extremely conservative and significantly overstates the effect because it is based on an average four-degree increase.<sup>93</sup> Because the UHS license amendment would only allow increased temperatures at the very hottest times, and would have no effect the rest of the time, the precise effect of the amendment is uncertain.<sup>94</sup>

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<sup>88</sup> *Id.* at A55, A57-A58.

<sup>89</sup> *Id.* at A98, A103-104.

<sup>90</sup> *Id.* at A98 (*citing* Exhibit FPL-035; Excerpt from Units 3&4 Uprate Site Certification Application).

<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> *Id.* at 99.

<sup>94</sup> *Id.*

In his testimony, Mr. Bolleter provided an evaluation that addressed this uncertainty by considering temperature data from TPSWCCS-6, an Uprate Monitoring Program station that is located several thousand feet upstream of the plant intake and is the closest such upstream station.<sup>95</sup> While the plant intake has not exceeded 100°F since August of 2014,<sup>96</sup> the TPSWCCS-6 monitoring station did experience such temperatures for a total of 61 hours during this time period.<sup>97</sup> Mr. Bolleter's evaluation used the TPSWCCS-6 monitoring station as a surrogate for the plant intake, essentially asking what the effect of the UHS license amendment may have been if the TS monitoring location was instead at this location, several thousand feet upstream of the plant intake.<sup>98</sup> Mr. Bolleter calculated the average CCS temperatures for this time period from five separate monitoring stations.<sup>99</sup> He then calculated the average a second time, but removed all readings at the TPSWCCS-6 station that exceeded 100°F.<sup>100</sup> To account for the fact that the rest of the CCS would probably be warmer when TPSWCCS-6 is at it hottest, he also subtracted the amounts by which TPSWCCS-6 exceeded 100°F from each of the other stations.<sup>101</sup> Comparing the original average temperature with this modified average (with the highest temperature recordings removed) can provide a proxy for what the temperature effect of the UHS license amendment might have looked like, if temperatures had actually exceeded 100°F at plant intake.<sup>102</sup> The difference between these two averages was 0.005°F.<sup>103</sup> The effects of such a

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<sup>95</sup> *Id.* at A102.

<sup>96</sup> *Id.* at A31; Exhibit FPL-012.

<sup>97</sup> *Id.* at A102, A103; Exhibit FPL-036 (Bolleter Temperature Evaluation).

<sup>98</sup> *Id.* at A103.

<sup>99</sup> *Id.*

<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

<sup>102</sup> *Id.*

<sup>103</sup> *Id.*

change on the salinity of the surrounding aquifer would be negligible and impossible to identify through environmental monitoring.<sup>104</sup>

Little to no impact in the surrounding aquifers has been seen in the time period since the CCS salinity began noticeably increasing in recent years.<sup>105</sup> This supports the conclusion that whatever marginal increase, if any, in salinity is ultimately caused by the UHS license amendment, it may not be measurable in the environment. In fact, because of the AO, and FPL's ongoing efforts to reduce CCS salinity, FPL's witnesses expect that future CCS salinity will be much lower than today, regardless of any impact of the NRC license amendment.<sup>106</sup> Ultimately, FPL's witnesses support the finding of the NRC's EA, which concludes that the proposed action would result in no significant impact on . . . groundwater resources."<sup>107</sup>

## **2. *The EA Adequately Discusses the Cumulative Impact Associated with FPL's Water Withdrawals***

The "cumulative impacts" section of the NRC's EA discusses FPL's aquifer withdrawals known at the time the EA was published. It states:

The South Florida Water Management District (SFWMD) recently granted FPL approval to withdraw a portion (approximately 5 million gallons per day [MGD]) of the Unit 5 withdrawal allowance for use in the CCS. FPL began pumping Floridan Aquifer water into the CCS in early July. FPL has also received temporary approval to withdraw 30 MGD from the Biscayne Aquifer, though FPL has not yet used this allowance.

FPL also anticipates the FDEP to issue an Administrative Order requiring FPL to install up to six new wells that will pump approximately 14 MGD of water from the Floridan Aquifer into the CCS. Modeling performed by FPL consultants and the SFWMD indicates that in approximately 2 years, the withdrawals would reduce the salinity of the CCS to the equivalent of

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<sup>104</sup> *Id.* at A104.

<sup>105</sup> *Id.* at A55.

<sup>106</sup> *Id.* at A68, A101.

<sup>107</sup> Exhibit NRC-009, 79 Fed. Reg. at 44,466.

Biscayne Bay (about 34 parts per thousand [ppt]). Such withdrawals could also help moderate water temperatures.<sup>108</sup>

FPL's testimony explains that FPL made several requests to local regulators in 2014 to withdraw water from local sources to mitigate CCS conditions.<sup>109</sup> Contrary to CASE's assertions, none of these water sources include fresh groundwater and the discussion in the NRC's EA is accurate and sufficient.<sup>110</sup>

a. *Withdrawals of Saltwater from the Biscayne Aquifer*

The witnesses explain that FPL began withdrawing 10 MGD of water from the Biscayne Aquifer – water with a salinity level high enough to qualify as seawater.<sup>111</sup> This is consistent with the discussion in the NRC's EA.<sup>112</sup> The Biscayne Aquifer wells are being used as short-term resource until the necessary modification to the Site Certification is obtained to allow the operation of the new Upper Floridan Aquifer wells.<sup>113</sup> The water being withdrawn from the Biscayne Aquifer is not fresh, is well behind the historic saltwater/freshwater interface, and the SFWMD considers it to be “seawater.”<sup>114</sup> The salinity of this water is demonstrated by of an Aquifer Performance Test performed as part of the Turkey Point 6&7 project as well as from

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<sup>108</sup> Exhibit NRC-009, 79 Fed. Reg. at 44,468; FPL Panel Testimony at A111, A114

<sup>109</sup> FPL Panel Testimony at A18, A27.

<sup>110</sup> *Id.* at A18, A27-A29, A111-A117.

<sup>111</sup> *Id.* at A27, A35-A37.

<sup>112</sup> *Id.* at A114-A115.

<sup>113</sup> *Id.* at A27, A78.

<sup>114</sup> *Id.* at A32, A34-A37. Several exhibits support the conclusion that this water is of similar salinity to seawater: FPL-013 (USGS Saltwater intrusion lines); FPL-014 (FPL's 2012 Comprehensive Pre-Uprate Monitoring Report); FPL-015 (1957 Report of Florida State Board of Conservation on Salt-Water Encroachment); FPL-016 (Report on Saltwater Intrusion in Biscayne Aquifer); FPL-017 (Excerpt from Turkey Point 6&7 Biscayne Aquifer Performance Test); FPL-018 (Letter from the SFWMD); FPL-019 (FPL's 2015 Biscayne Well Withdrawal Salinity Data); and FPL-020 (Figure Excerpted from 2014 Uprate Monitoring Report).

sampling performed on the water during recent withdrawals.<sup>115</sup> The withdrawal of water from the Biscayne Aquifer does not exacerbate saltwater intrusion because it involves removing saltwater from the seaward side of the saltwater/freshwater interface.<sup>116</sup>

b. *Withdrawals of Brackish Water from the Upper Floridan Aquifer*

The testimony also notes that in 2014, FPL requested a reallocation of up to 5 million gallons per day of brackish water from the Upper Floridan Aquifer that had been previously authorized for Turkey Point Unit 5 combined cycle natural gas power plant.<sup>117</sup> FPL began withdrawing this water for CCS mitigation in 2014.<sup>118</sup> This was described in the NRC's EA.<sup>119</sup> And the FDEP AO, issued in December 2014 requires FPL to reduce salinity in the CCS to 34 practical salinity units ("psu").<sup>120</sup> FPL plans to add six Upper Floridan Aquifer wells to withdraw approximately 14 MGD to reduce the salinity of the CCS.<sup>121</sup> Though this occurred after the publication of the NRC's EA, it was anticipated and discussed in the EA and is consistent with the discussion in the EA.<sup>122</sup>

FPL's testimony explains that there would be no negative impact on saltwater intrusion arising from the Upper Floridan Aquifer withdrawals.<sup>123</sup> The Upper Floridan Aquifer is separate

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<sup>115</sup> *Id.* at A35, Exhibits FPL-017, FPL-019.

<sup>116</sup> *Id.* at A79.

<sup>117</sup> *Id.* at A27; Exhibit FPL-010 (2014 SCA Amendment).

<sup>118</sup> *Id.* at A27.

<sup>119</sup> *Id.* at A114.

<sup>120</sup> *Id.* at A59-A60.

<sup>121</sup> *Id.* at A63. Exhibit FPL-027 is FPL's application to the FDEP for a modification of the Site Certification to allow the construction and operation of the Upper Floridan wells.

<sup>122</sup> *Id.* at A111-A112. The FDEP approval of the new Upper Floridan wells has been delayed by an administrative challenge. *Id.* at A63. The FDEPs' order is provided as Exhibit FPL-028.

<sup>123</sup> *Id.* at A81-A82.

from the surficial Biscayne Aquifer and, while its water is much less saline than the water in the CCS, the Upper Floridan Aquifer is still not considered fresh because it is too salty to be used as a drinking water supply.<sup>124</sup> The Aquifer Performance Test for the Upper Floridan Aquifer performed as part of the Turkey Point Unit 5 site certification application demonstrates that this water is brackish.<sup>125</sup> This level of salinity makes the Upper Floridan Aquifer water ideal for CCS freshening – it is not under high demand because it does not meet drinking water standards, but is still fresh enough to make a significant contribution to CCS salinity reduction.<sup>126</sup> FPL’s withdrawal of brackish water from the Upper Floridan Aquifer will not significantly contribute to saltwater intrusion and will result in only a negligible local increase in salinity in the Upper Floridan Aquifer.<sup>127</sup> One of the reasons for this conclusion is that the proposed Upper Floridan wells are spread out, separated by about 1900 feet, in order to reduce their influence.<sup>128</sup>

Because these withdrawals will not exacerbate saltwater intrusion and will in fact mitigate it, NRC’s EA appropriately described the beneficial effects of the withdrawals instead of the “negligible” or non-existent negative effects.<sup>129</sup>

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<sup>124</sup> *Id.* at A27, A32, A38, A82; Exhibit FPL-022 (Reese. 1994; Hydrogeology and the Distribution and Origin of Salinity in the Floridan Aquifer System).

<sup>125</sup> *Id.* at A38, Exhibit FPL-021 (Unit 5 Site Certification Application Excerpt).

<sup>126</sup> *Id.* at A27, A38, A80.

<sup>127</sup> *Id.* at A75-A76, A80-A82. Exhibit FPL-027, FPL’s 2014 Site Certification Modification application, includes a technical memorandum from Mr. Andersen describing the amount of Upper Floridan Aquifer water necessary to reduce the CCS salinity to approximately 34 psu. Exhibit FPL-030 is a revised version of a memorandum from Mr. Andersen identifying the drawdown in the Upper Floridan Aquifer from these withdrawals.

<sup>128</sup> *Id.* at A82; Exhibit FPL-029 (figure showing proposed Upper Floridan well locations).

<sup>129</sup> *Id.* at A116.

**3. *Supplementation of the EA to Include New Information is Not Necessary***

As discussed above, FPL maintains that events that occurred after the NRC issued the license amendment are not relevant to the pertinent question raised by CASE Contention 1—whether the NRC had complied with NEPA at the time when the federal action occurred.<sup>130</sup> FPL turns to these circumstances now, because Contention 1, as admitted, discusses events, such as FPL’s withdrawals from the L-31 E canal, which post-dated the NRC license amendment. Regardless of whether these topics are appropriately before this Board, the end result should be the same, because none of them “paint a seriously different picture” of the environmental impact of the license amendment and should not alter the NRC’s finding of no significant impact. To this end, FPL’s witnesses identify several additional developments that occurred after the publication of the EA and the issuance of the UHS amendment.

First, at the time of the publication of the EA, FPL had not yet begun operation of the marine Biscayne wells.<sup>131</sup> But the withdrawal and use of this salty water was anticipated and considered in the EA and so does not “paint a seriously different picture” of the environmental impacts of the project.<sup>132</sup> In 2015, FPL expanded this well field to include two additional wells on the Turkey Point peninsula, adding approximately 35 MGD to the 10 MGD it had originally begun withdrawing.<sup>133</sup> Though this is more total water than was anticipated in the NRC’s EA, it does not paint a seriously different picture of the environmental impacts because it is saltwater,

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<sup>130</sup> *Marsh*, 490 U.S. at 374.

<sup>131</sup> *Id.* at A114-A115.

<sup>132</sup> *Id.* at A116.

<sup>133</sup> *Id.* at A27, A115.

withdrawn from behind the saltwater/freshwater interface and will still not have a significant environmental impact.<sup>134</sup>

Second, as anticipated in the EA, in December 2014, the FDEP issued the Administrative Order requiring FPL to reduce salinity in the CCS to approximately 34 psu and requiring FPL to submit a salinity management plan to meet that goal.<sup>135</sup> And, FPL, in fact, plans to rely upon the Upper Floridan Aquifer wells for AO compliance, as described in the EA.<sup>136</sup> Because the withdrawal of this brackish water was anticipated and considered in the EA, it does not “paint a seriously different picture” of the environmental impacts of these withdrawals, which will still not have a significant environmental impact.<sup>137</sup>

Third, in August 2014, the SFWMD approved FPL’s request for a temporary withdrawal of excess stormwater from the L-31 E canal.<sup>138</sup> As FPL’s witnesses explain, if not diverted to the CCS, this water would have been discharged to Biscayne Bay.<sup>139</sup> FPL again sought approval to use excess L-31 E water in 2015.<sup>140</sup> FPL received this additional authorization to use excess storm water from the L-31 E after an existing reservation for Biscayne Bay is met during the rainy season (June 1 – November 30).<sup>141</sup> While that approval was challenged, FPL subsequently obtained an Emergency Authorization to draw water from the L-31 E pending resolution of the

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<sup>134</sup> *Id.* at A79, A116.

<sup>135</sup> *Id.* at A59-A60, A111-A112; Exhibit INT-004 at ¶37.a.

<sup>136</sup> *Id.* at A63.

<sup>137</sup> *Id.* at A111-A112, A116.

<sup>138</sup> *Id.* at A27, A86; Exhibit FPL-031 is the SFWMD’s 2014 emergency order allowing the L-31 E consumptive use.

<sup>139</sup> *Id.* at A27, A87.

<sup>140</sup> *Id.* at A27, A88. Exhibit FPL-032 is FPL’s 2015 L-31 E consumptive use permit application.

<sup>141</sup> *Id.* at A88. Exhibit FPL-033 is the SFWMD’s 2015 L-31 E consumptive use permit. Attached thereto is a memorandum by Mr. Andersen describing the effects of the additions on CCS salinity.

administrative challenge.<sup>142</sup> The diversion of water from the L-31 E canal, which would otherwise be released to the ocean, has no negative impact on saltwater intrusion, and instead has positive effects on the westward movement of saltwater to the extent it serves to freshen the CCS.<sup>143</sup> These withdrawals would not negatively impact saltwater intrusion and so do not “paint a seriously different picture” of the environmental impacts of the project.<sup>144</sup>

Finally, FPL’s witnesses explain that Miami-Dade County recently issued a “Notice of Violation and Orders for Corrective Action” (“NOV”) to FPL.<sup>145</sup> The NOV was based on the County’s determination that levels of chloride in samples collected from groundwater monitoring wells located outside the CCS constitute violations of county water quality standards.<sup>146</sup> This is not materially different information from that described in the FDEP Administrative Order, in that it is based on the presence of CCS water in groundwater outside FPL’s property.<sup>147</sup> FPL entered into a Consent Agreement with Miami-Dade County in which FPL agreed to perform certain additional mitigative measures, including the installation and operation of recovery wells to intercept hypersaline water beyond FPL’s property.<sup>148</sup> As with the aquifer withdrawals, these activities are intended to mitigate or abate the presence of hyper saline water west of the CCS.<sup>149</sup>

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<sup>142</sup> *Id.* at A89. Exhibit FPL-034 is the SFWMD’s emergency order allowing the L-31 E consumptive use for 2015.

<sup>143</sup> *Id.* at A92. *See also* the Andersen memo attached to Exhibit FPL-033.

<sup>144</sup> *Id.* at A118.

<sup>145</sup> *Id.* at A65; Exhibit INT-005.

<sup>146</sup> *Id.* at A65; Exhibit INT-005 at 1.

<sup>147</sup> *Id.* at A66, A113.

<sup>148</sup> *Id.* at A65, A113; Exhibit INT-006 at 4-8.

<sup>149</sup> *Id.* at A65-A67, A113.

None of these recent activities paint a seriously different picture of the impacts from the project.<sup>150</sup> As a result, there is no need to supplement the NRC's EA to address these topics.

**C. Discussion of Beyond-Scope Issues Raised By CASE**

While the Board should not consider the issues raised by CASE that are beyond the scope of Contention 1, none of them call into question the sufficiency of the NRC's EA. FPL's witnesses explain that there is no evidence that operation of the CCS has any measurable impact on Biscayne Bay.<sup>151</sup> Samples of saline groundwater under Biscayne Bay show some presence of CCS water in wells located within 0.5 to 2 miles of the CCS, mostly at depth.<sup>152</sup> However there is no indication that CCS water in groundwater is upwelling into Biscayne Bay, which is to be expected because of the high density of the hypersaline CCS water.<sup>153</sup> CASE's insinuation of significant impacts to Biscayne Bay that were ignored in the EA is simply incorrect.

FPL's witnesses also explain that the Uprate Monitoring Program includes ecological monitoring.<sup>154</sup> This includes monitoring of plant community characteristics, leaf characteristics, nutrient content in the leaves, and soil/sediment, and porewater quality in twelve transects in marsh and mangrove areas around the CCS.<sup>155</sup> In Biscayne Bay, FPL's program assessed submerged aquatic vegetation, coral and sponge community composition and cover, fish and invertebrate species composition and abundance, nutrient content in seagrass leaves and sediment, light attenuation, and porewater quality in twenty transects during the Pre-Uprate and

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<sup>150</sup> *Id.* at A112-A118.

<sup>151</sup> *Id.* at A47.

<sup>152</sup> *Id.* at A47.

<sup>153</sup> *Id.* at A47-A48.

<sup>154</sup> *Id.* at A42-A43, A52.

<sup>155</sup> *Id.* at A52.

Interim Operating period.<sup>156</sup> Based on five years of monitoring over nearly 100 square miles in and around the CCS as part of the Uprate Monitoring Program, there is no evidence of ecological impact to Biscayne Bay.<sup>157</sup> Also there is no evidence of salt water impacts from the CCS on the marsh and mangrove areas around the CCS.<sup>158</sup> For this reason, contrary to CASE's claims, there is no need for further ecological monitoring associated with the NRC's license amendment.

Finally, FPL's witnesses explain that contrary to CASE's characterization, the EA evaluated the impact of the UHS amendment on federally-protected species or habitats, such as the American Crocodile.<sup>159</sup> The EA also evaluated FPL's use of copper sulfate to manage algae and the potential effects on crocodiles.<sup>160</sup> And, contrary to CASE's characterization, the EA considered alternatives to the license amendment.<sup>161</sup> None of these out-of-scope issues raised by CASE identify a deficiency with the NRC's EA.

## **VI. CONCLUSION**

Overall, the EA and the record satisfy NEPA with respect to the impact of the UHS license amendment on groundwater. The NRC Staff has taken the requisite hard look at the impacts of the license amendment. The EA addressed the significant aspects of the probable environmental impacts of the proposed action. Moreover, each of the issues raised by CASE has been considered by the NRC Staff in the EA or is discussed in the testimony of the witnesses.

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<sup>156</sup> *Id.*

<sup>157</sup> *Id.*

<sup>158</sup> *Id.*

<sup>159</sup> *Id.* at A119; Exhibit NRC-009, 79 Fed. Reg. at 44,467.

<sup>160</sup> *Id.* at A120; Exhibit NRC-009, 79 Fed. Reg. at 44,468.

<sup>161</sup> *Id.* at A121; Exhibit NRC-009, 79 Fed. Reg. at 44,469.

With respect to the impact of the UHS license amendment on salinity in the CCS or surrounding aquifers, the testimony shows that there will be a negligible impact on CCS salinity and so there would be a negligible impact on surrounding aquifers.<sup>162</sup> The testimony also makes clear that the positive impact of FPL’s ongoing CCS freshening activities would overwhelm any (already negligible) negative effect of the amendment.<sup>163</sup> For this reason, there was no need for the NRC to discuss increased saltwater intrusion in the EA as an impact of the license amendment. FPL’s testimony supports the conclusion of the EA, that there would be no significant impact from the UHS license amendment. The EA “comes to grips with all important considerations” and nothing more need be done.<sup>164</sup>

The testimony further demonstrates that the EA accurately describes the cumulative impacts of water withdrawals known at the time the EA was published, which would involve the withdrawal of saltwater from the Biscayne aquifer wells and brackish water from the UFA wells.<sup>165</sup> Because these were the only CCS mitigation measures known at the time of the license amendment, they are the only ones that could have been discussed at the time of the NRC’s action. Moreover, even if the Board determines that the EA must include consideration of actions that occurred after the NRC issued the license amendment, such as the L-31 E withdrawals, the EA still would not require supplementation because these actions will not cause or contribute to meaningful saltwater intrusion. Therefore, these actions do not paint a seriously different picture of the environmental impacts of the project and certainly would not change the NRC’s finding

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<sup>162</sup> *Id.* at A98, A103.

<sup>163</sup> *Id.* at A68, A101.

<sup>164</sup> *Systems Energy Resources, Inc.* (Early Site Permit for Grand Gulf Site), CLI-05-4, 61 NRC 10, 13 (2005).

<sup>165</sup> *Id.* at A116.

that the UHS license amendment would present no significant environmental impact. For these reasons, CASE Contention 1 should be resolved in favor of FPL and the NRC Staff.

However, to the extent the Board concludes that the EA is deficient, there is ample evidence in the record to allow the Board to provide any necessary supplementation. The EA is augmented by the full record of this proceeding, including the testimony and exhibits, which in the aggregate are more than sufficient to satisfy the agency's obligation under NEPA.<sup>166</sup>

Respectfully Submitted,

*Signed (electronically) by Steven Hamrick*

Steven C. Hamrick  
Florida Power & Light Company  
801 Pennsylvania Avenue, N.W. Suite 220  
Washington, DC 20004  
steven.hamrick@fpl.com  
202-349-3496

William S. Blair  
Erin Walkowiak  
Florida Power & Light Company  
700 Universe Blvd.  
Juno Beach, Florida 33408  
william.blair@fpl.com  
erin.walkowiak@fpl.com  
561-304-5238

November 10, 2015

COUNSEL FOR  
FLORIDA POWER & LIGHT COMPANY

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<sup>166</sup> LES, LBP-06-8, 63 NRC at 286.

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
Florida Power & Light Company	)	Docket No. 50-250-LA
	)	50-251-LA
(Turkey Point Units 3 and 4)	)	
	)	ASLBP No. 15-935-02-LA-BD01

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing “Florida Power & Light Company’s Initial Statement of Position” together with FPL’s exhibit list and exhibits, including its initial written testimony, were provided to the E-Filing system for service to those individuals on the service list in this proceeding.

*Signed (electronically) by,*

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Steven C. Hamrick  
Florida Power & Light Company  
801 Pennsylvania Avenue, N.W. Suite 220  
Washington, DC 20004  
steven.hamrick@fpl.com  
202-349-3496

Dated at Washington, DC  
this 10th day of November, 2015