

# County of Monroe

The Florida Keys



**BOARD OF COUNTY COMMISSIONERS**

Mayor Heather Carruthers, District 3  
Mayor Pro Tem Michelle Coldiron, District 2  
Craig Cates, District 1  
David Rice, District 4  
Sylvia J. Murphy, District 5

## County Commission Meeting

June 4, 2020

Agenda Item Number: C.1

Agenda Item Summary #6981

**BULK ITEM:** No

**DEPARTMENT:** County Attorney's Office

**TIME APPROXIMATE:**  
n/a

**STAFF CONTACT:** Derek Howard (305) 292-3470

**AGENDA ITEM WORDING:** Discussion and direction on whether to file a petition to intervene in support of the Florida Keys Aqueduct Authority (FKAA) if FKAA files a petition for administrative hearing directed to the April 13, 2020, notice of intent by the Florida Department of Environmental Protection (DEP) to issue a permit to Florida Power & Light Company (FPL) to operate wastewater treatment and effluent disposal facilities at the Turkey Point Power Plant and to retain the firm of Lewis, Longman & Walker PA jointly with the FKAA.

**ITEM BACKGROUND:** On October 22, 2009, FPL applied to DEP for a permit to operate wastewater and effluent disposal facilities at the Turkey Point Power Plant. On April 13, 2020, DEP issued a notice of intent to issue the applied for permit. The notice stated DEP will issue the permit unless a petition for an administrative hearing is timely filed under Sections 120-569 and 120.57, Florida Statutes.

Pursuant to Rule-62-110.106(4), Florida Administrative Code, the FKAA filed for an extension of time to file a petition for an administrative hearing. The deadline for the FKAA to file a petition for an administrative hearing is June 4, 2020. If the FKAA files a petition, the County may thereafter file a petition to intervene in support of the FKAA. The petition would focus on protecting the FKAA's Florida City wellfield against the saltwater intrusion plume emanating from the cooling canals at Turkey Point but also focus on protecting the natural resources of the County.

The FKAA has retained the law firm of Lewis, Longman, & Walker PA to represent it in this matter. Assuming that the firm's conflict check shows no adverse cases to the County, staff is proposing that the County jointly retain the firm to equally share those litigation expenses with the FKAA that are not covered by others.

**PREVIOUS RELEVANT BOCC ACTION:**

April 20, 2016: BOCC Approval of Resolution 87-2016 expressing concern for the eastern and western migration of the hypersaline plume, support for Miami Dade DERM's issuance of the Notice of Violation and the Consent Agreement, and support for FKAA to take all steps necessary to

protect the Florida Keys drinking water supply.

July 5, 2016: Letter to DEP in support of DEP and DERM actions re: Turkey Point

February 15, 2017: BOCC Approval of Resolution 43-2017 expressing concern for the discovery and impacts of the eastern and western migration of the hypersaline plume and seeking the decommissioning of the cooling canal system in favor of a more modern mechanical draft cooling tower system.

August 2017: Submitted comments to the NRC re: FPL’s application for a Combined Operating License to construct and operate Units 6 and 7

June 20, 2018: Discussion and direction at its June 20, 2018, regular meeting regarding Agenda Item Number M.4 (“Approval of submission of letter with the Board’s comments to the US Nuclear Regulatory Commission regarding Florida Power and Light’s application for a Subsequent License Renewal for Turkey Point Units 3 and 4).

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**CONTRACT/AGREEMENT CHANGES:**

n/a

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**STAFF RECOMMENDATION:** Approval

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**DOCUMENTATION:**

FPL Turkey Point Units 3 and 4 Docket ID NRC-2018-0101 Monroe County, Fl Comments 6/21/2018

Docket 52-040-COL Monroe County Comment Letter to NRC on FPL Application for Turkey Point Units 6 7 30 August 2017

Resolution 043-2017 Turkey Point Cooling Canals BOCC 2/15/2017

DEP Turkey Point Letter 06.23.2016

Resolution 87 2016 BOCC 4/20/2016

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**FINANCIAL IMPACT:**

**Effective Date: upon adoption**  
**Expiration Date: n/a**  
  
**Total Dollar Value of Contract: TBD**  
**Total Cost to County: estimated between \$50,000 and \$250,000.**  
**Current Year Portion: TBD**  
**Budgeted: Yes**  
**Source of Funds: Ad valorem**  
**CPI:**  
**Indirect Costs:**  
**Estimated Ongoing Costs Not Included in above dollar amounts:**

<b>Revenue Producing:</b>	<b>If yes, amount:</b>
<b>Grant:</b>	
<b>County Match:</b>	
<b>Insurance Required:</b>	
<b>Additional Details:</b>	

Yes - to be determined

**REVIEWED BY:**

Bob Shillinger	Completed	05/31/2020 10:02 PM
Derek Howard	Completed	05/31/2020 11:17 PM
Purchasing	Skipped	05/31/2020 10:01 PM
Budget and Finance	Completed	06/01/2020 9:00 AM
Maria Slavik	Skipped	05/31/2020 10:01 PM
Kathy Peters	Completed	06/01/2020 9:18 AM
Board of County Commissioners	Pending	06/04/2020 11:00 AM

# County of Monroe

## The Florida Keys



### BOARD OF COUNTY COMMISSIONERS

Mayor David Rice, District 4  
 Mayor Pro Tem Sylvia Murphy, District 5  
 Danny L. Kolhage, District 1  
 Heather Carruthers, District 3  
 George Neugent, District 2

Mayor David Rice  
 Monroe County Board of County Commissioners  
 Historic Gato Building, 1100 Simonton Street  
 Key West, Florida 33040

June 21, 2018

Ms. May Ma, Director Program Management  
 Announcements and Editing Branch  
 Office of Administration  
 Mailstop: TWFN-7A6OM  
 U.S. Nuclear Regulatory Commission  
 Washington, DC 20555-0001

Re: Subsequent License Renewal Application Turkey Point Units 3 and 4

Dear Ms. May Ma:

Florida Power and Light (FPL) has filed an application with the Nuclear Regulatory Commission seeking approval of a Subsequent License Renewal for Units 3 and 4 at the Turkey Point site in Miami-Dade County. The requested renewal would extend the operational life of the units and the existing cooling canal system (CCS) to 2053. Monroe County, which comprises the Florida Keys and operates under the Area of Critical State Concern statutory designation, borders Miami-Dade County to the south.

Monroe County is following closely the developments at the Turkey Point facility. Representatives of the County attended the Scoping Meeting on May 31, 2018 in Homestead, Florida. I write to briefly state Monroe County's serious concerns about Turkey Point facility and its license renewal application.

FPL is experiencing difficulties in the current operation of Units 3 and 4 at Turkey Point, specifically with regard to the CCS for these units. One byproduct of FPL's current operation of the CCS for Units 3 and 4, and our primary concern, is an underground hypersaline plume emanating from the cooling canal system westward toward the FCAA Biscayne Aquifer wellfield, placing the drinking water supply for all of Monroe County in jeopardy. Of secondary concern, is the eastward movement of the underground plume from the CCS into the environmentally sensitive Biscayne Bay.

These developments are of grave concern to Monroe County as set forth in Resolutions 87-2016 and 43-2017. Copies of the resolutions are attached hereto as Exhibits A and B, respectively.

Monroe County requests that any granting of FPL's requested subsequent license renewal for Units 3 & 4 at Turkey Point be conditioned upon the following:

- Demonstrated remediation of the existing hypersaline plume within a reasonable timeframe and with an identified completion date.
- Decommissioning of the CCS and replacement with new cooling towers to safeguard our water supply and surrounding natural resources.

Respectfully submitted,

Mayor David Rice  
 Monroe County Board of County Commissioners

Enclosures (2)

Attachment: FPL Turkey Point Units 3 and 4 Docket ID NRC-2018-0101 Monroe County, FI Comments 6/21/2018 (FKAA DEP FPL Turkey Point

Mayor Carruthers

**RESOLUTION NO. 087-2016**

**A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA EXPRESSING ITS CONCERN OVER THE THREAT FLORIDA POWER & LIGHT COMPANY'S TURKEY POINT FACILITY'S COOLING CANAL SYSTEM POSES TO MONROE COUNTY'S SOURCE OF POTABLE WATER AND BISCAYNE BAY; EXPRESSING A DESIRE TO WORK COOPERATIVELY WITH MIAMI-DADE COUNTY AND OTHER AGENCIES WITH JURISDICTION TO PROTECT THE FLORIDA KEYS POTABLE WATER SUPPLY; ENCOURAGING THE FLORIDA KEYS AQUEDUCT AUTHORITY TO TAKE ALL STEPS NECESSARY TO PROTECT ITS WELLFIELDS IN FLORIDA CITY; DIRECTING THE CLERK TO DISTRIBUTE THE RESOLUTION; AND PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS, Monroe County is the southernmost county in the State of Florida and home to the world renown Florida Keys; and**

**WHEREAS, Monroe County shares a common boundary with Miami-Dade County which is approximately 152 miles<sup>i</sup> long; and**

**WHEREAS, the Florida Keys is home to approximately 75,000 full time residents plus several thousand part time residents many of whom reside full time in Miami-Dade County; and**

**WHEREAS, the Florida Keys Aqueduct Authority (FKAA) is the public entity created by the Legislature<sup>ii</sup> which has been vested with the responsibility for providing potable water to residents and businesses in the Florida Keys; and**

**WHEREAS, the FKAA draws potable water primarily from the Biscayne Aquifer through a wellfield located west of Florida City<sup>iii</sup> within Miami-Dade County; and**

**WHEREAS, Florida Power & Light Company (FPL) is the third-largest electric utility in the United States and provides powers to over 4.8 million customers<sup>iv</sup> in the state; and**

**WHEREAS, FPL owns and operates it's Turkey Point facility in southeast Miami-Dade County comprised of multiple power generating units; and**

**WHEREAS, the Turkey Point facility includes an approximately 5,900-acre network of unlined canals and an interceptor ditch on the western side of the network, or collectively the cooling canal system<sup>v</sup> (CCS), which dissipates heat from the water used in the operation of FPL's nuclear Units 3 and 4, as well as Unit 1 when in operation; and**

**WHEREAS, FPL's CCS is located at its closest point less than two miles from the Miami-Dade/Monroe County line and approximately 9.5 miles from the FKAA's wellfield in Florida City; and**

Mayor Carruthers

**WHEREAS**, that while the CCS has no direct surface water discharges, data shows that water from the CCS has moved beyond its boundaries; and

**WHEREAS**, the hypersaline plume extends two or three miles west of the CCS and continues to move westward and the plume is pushing the saline water interface, which is now four or five miles west of the CCS, at the rate of 400 to 600 feet per year.<sup>vi</sup>; and

**WHEREAS**, Monroe County supports Miami-Dade County's Division of Environmental Resources Management (DERM) for issuing a Notice of Violation and Orders for Corrective Action (October 2, 2015) against FPL to redress alleged violations of the Miami-Dade County Code involving the CCS and entering into a Consent Agreement with FPL on October 6, 2015 to resolve those violations; and

**WHEREAS**, Miami-Dade County recently issued a Report<sup>vii</sup> on March 7, 2016 indicating that:

- a. the long term water quality in the CCS is degrading,<sup>viii</sup>
- b. water from the CCS is migrating outside its boundaries away from the Turkey Point facility property with impacts measured in both surface and groundwater;<sup>ix</sup>
- c. monitoring data indicate that a hyper-saline groundwater plume originating from the CCS has migrated landward and is impacting water quality;<sup>x</sup>
- d. results for recent tritium sampling (an isotope of hydrogen that is frequently associated with the operation of nuclear power plants) provide the most compelling evidence that water originating from the CCS is reaching tidal surface waters connected to Biscayne Bay;<sup>xi</sup> and
- e. rainfall, pumping additional water into the CCS and operations of the CCS Interceptor Ditch lead to record high water stage in the CCS which would be expected to result in increased seepage of water from the CCS into surrounding ground waters and perhaps surface waters.<sup>xii</sup>

**WHEREAS**, Monroe County is concerned that the westward migrating hypersaline plume in the Biscayne Aquifer places the Florida Keys' source of potable water in jeopardy; and

**WHEREAS**, Monroe County is also concerned that the eastern migration of the hypersaline plume into the tidal surface waters connected to Biscayne Bay (and potentially the Biscayne Bay Aquatic Preserve) places these water resources in jeopardy where Monroe County citizens fish and recreate; and

**WHEREAS**, Monroe County is working to gain a full understanding of all the solutions being proposed by DERM and the other agencies with jurisdiction over Turkey Point and the CCS including, but not limited to, the Florida Department of Environmental Protection (DEP), the South Florida Water Management District (SFWMD) and the Nuclear Regulatory Commission (NRC); and

**WHEREAS**, Monroe County desires to work cooperatively with Miami-Dade County leadership and other agencies with jurisdiction over Turkey Point and the CCS to ensure that the FCAA's wellfields are protected to the maximum extent possible now and in the future; and

Mayor Carruthers

**WHEREAS, a comprehensive approach is needed to 1) stop the western movement of the hypersaline plume immediately, 2) remove the CCS discharges into the Biscayne Aquifer in an expedited manner and 3) address any impacts to Biscayne Bay; and**

**WHEREAS, Monroe County calls upon its partners at the FCAA to take all steps necessary to protect the Florida Key's supply of potable water, including potential partnering on the development of new technical data to better understand the extent of the hypersaline plume and potential threat to the FCAA's wellfields; and**

**WHEREAS, Monroe County reserves its right to initiate the conflict resolution provisions of the Florida Governmental Conflict Resolution Act<sup>xiii</sup> and to bring an action under the Florida Environmental Protection Act<sup>xiv</sup> or any other available Federal or State legal remedy at a later date should the Board deem such action appropriate;**

**NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA THAT:**

1. The above recitals are hereby incorporated into this resolution as restated herein constitute the legislative findings and intent of the Board of County Commissioners of Monroe County, Florida.
2. The Miami-Dade County leadership, the SFWMD and DEP are invited to open a dialog with Monroe County in support of finding comprehensive solutions to combat the western migration of the hypersaline plume stemming from FPL's Turkey Point CCS; remove the CCS discharges into the Biscayne Aquifer in an expedited manner; and address any impacts to Biscayne Bay.
3. Monroe County encourages the FCAA to take all steps necessary to protect the potable water supply for the Florida Keys including its wellfields in Florida City.
4. Monroe County is willing to provide material support to the FCAA to enhance its current efforts to protect the Florida City wellfields.
5. The Clerk for this Board shall furnish copies of this resolution to:
  - U.S. Senator Bill Nelson
  - U.S. Senator Marco Rubio
  - U.S. Representative Carlos Curbelo, District 26
  - Florida Governor Rick Scott
  - Florida Senate President Andy Gardiner
  - Florida House Speaker Steve Crisafulli
  - State Senator Dwight Bullard, District 39
  - State Senator Anitere Flores, District 37
  - State Representative Holly Raschein, District 120
  - Chairman of the Nuclear Regulatory Commission Stephen G. Burns
  - Chair, South Florida Water Management District Governing Board, Daniel O'Keefe
  - Executive Director, South Florida Water Management District Peter Antonacci
  - Secretary, Florida Department of Environmental Protection, Jon Steverson

Mayor Carruthers

- Miami Dade County Mayor Carlos Gimenez
- Chair, Florida Keys Aqueduct Authority Robert Dean
- Executive Director, Florida Keys Aqueduct Authority Kirk Zuelch

6. This resolution shall take effect immediately upon adoption.

PASSED AND ADOPTED by the Board of County Commissioners of Monroe County Florida, at a regular meeting of said Board held on the 20<sup>th</sup> day of April, 2016.

Mayor Heather Carruthers	<u>Yes</u>
Mayor pro tem George Neugent	<u>Not Present</u>
Commissioner Danny L. Kohlhaege	<u>Yes</u>
Commissioner David Rice	<u>Yes</u>
Commissioner Sylvia Murphy	<u>Yes</u>



HEAVILIN, CLERK

*Heather Carruthers*  
Deputy Clerk

BOARD OF COUNTY COMMISSIONERS  
OF MONROE COUNTY, FLORIDA

By: *Heather Carruthers*  
Mayor Heather Carruthers

MONROE COUNTY ATTORNEY  
APPROVED AS TO FORM  
*Robert B. Shillinger, Jr.*  
ROBERT B. SHILLINGER, JR.  
COUNTY ATTORNEY  
Date 4-19-16

<sup>1</sup> Per Brian Davisson, Monroe County GIS Planner.  
<sup>2</sup> See, ch. 76-441, Laws of Florida.  
<sup>3</sup> [http://www.fkaa.com/our\\_water\\_source.htm](http://www.fkaa.com/our_water_source.htm)  
<sup>4</sup> <https://www.fpl.com/about/company-profile.html>  
<sup>5</sup> Consent Agreement in *Miami-Dade County v. Florida Power & Light Co.*, dated October 7, 2015.  
<sup>6</sup> *Tropical Audubon Society v. FP&L and SFWMD, Case 15-3845*, ¶ 46 (DOAH Rec'd Order Dec. 31, 2015); <https://www.doah.state.fl.us/ROS/2015/15003845.pdf>.  
<sup>7</sup> Report on Recent Biscayne Bay Water Quality Observations Associated with Florida Power and Light Turkey Point Cooling Canal systems Operations -- Directive 152884, dated March 7, 2016 (Miami-Dade Report).  
<sup>8</sup> Miami-Dade Report pg. 1.  
<sup>9</sup> Miami-Dade Report, pg. 5.  
<sup>10</sup> Miami-Dade Report pg. 3.  
<sup>11</sup> Miami-Dade Report pg. 4.  
<sup>12</sup> Miami Dade Report pg. 4  
<sup>13</sup> F.S. 164.101 *et seq.*  
<sup>14</sup> F.S. 403.412.

FILED FOR RECORD  
 2016 APR 25 PM 12: 29  
 L.M. CIR. CL.  
 MONROE COUNTY, FLA

Attachment: FPL Turkey Point Units 3 and 4 Docket ID NRC-2018-0101 Monroe County, FI Comments 6/21/2018 (FKAA DEP FPL Turkey Point

**RESOLUTION NO. 043 - 2017**

**A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA SUPPORTING EFFORTS TO SEEK A COMMITMENT FROM FLORIDA POWER AND LIGHT TO DISCONTINUE USE OF THE COOLING CANAL SYSTEM AT THE TURKEY POINT NUCLEAR POWER PLANT AS SOON AS POSSIBLE; PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS, The Florida Power and Light Turkey Point Nuclear Power Plant, located in south Miami-Dade County, utilizes a cooling canal system which consists of a network of approximately 5,900 acres of unlined canals; and**

**WHEREAS, The Florida Power and Light Turkey Point Nuclear Power Plant is the only facility in the world that uses a cooling canal system instead of mechanical draft cooling towers; and**

**WHEREAS, water from this cooling canal system communicates with the surrounding groundwater, and long-term monitoring data has shown that a hypersaline plume of water from the cooling canals has been migrating into and contaminating the groundwater, beyond the boundaries of the cooling canals; and**

**WHEREAS, Miami-Dade County took action to address this issue, including, but not limited to issuing a Notice of Violation in 2015 to Florida Power and Light for certain water quality violations in the groundwater, and requiring, through an administrative consent agreement, the Florida Power and Light take certain remedial actions to retract and contain the hypersaline ground water plume; and**

**WHEREAS, at that time, the issues were focused on the westward migration of the hypersaline ground water plume from the cooling canals, more recent water quality sampling has detected exceedances of water quality standards in certain surface water locations in or connected to Biscayne Bay, adjacent to and east of the cooling canal system; and**

**WHEREAS, this Board, the residents of Monroe County and members of the general public are concerned about these recent discoveries and potential impacts on Card Sound, Biscayne Bay, and the Florida Keys' drinking water supply, and such discoveries serve to highlight the challenges posed by the continued operation of the cooling canal system; and**

**WHEREAS, Florida Power and Light has a license from the federal government to operate the Turkey Point Power Plant units that use the cooling canal system until 2033; and**

**WHEREAS, this Board is seeking a commitment from Florida Power and Light to discontinue the use of the cooling canal system in favor of a more modern mechanical draft cooling tower system that would remove all future interactions with ground water and make use of Miami-Dade County's reuse water;**

Attachment: FPL Turkey Point Units 3 and 4 Docket ID NRC-2018-0101 Monroe County, FL Comments 6/21/2018 (FKAA DEP FPL Turkey Point

**NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA that:**

- 1. The Monroe County Board of County Commissioners seeks a commitment from Florida Power and Light to discontinue the use of the cooling canal system at its Turkey Point Nuclear Power Plant, as soon as possible, in favor of mechanical draft cooling towers.
- 2. This resolution shall take effect upon adoption.

**PASSED AND ADOPTED** by the Board of County Commissioners of Monroe County, Florida, at a regular meeting of said Board held on the 15<sup>th</sup> day of February, 2017.

<b>Mayor George Neugent</b>	<u><b>Yes</b></u>
<b>Mayor Pro Tem David Rice</b>	<u><b>Yes</b></u>
<b>Commissioner Danny Kolhage</b>	<u><b>Yes</b></u>
<b>Commissioner Heather Carruthers</b>	<u><b>Yes</b></u>
<b>Commissioner Sylvia Murphy</b>	<u><b>Yes</b></u>



**VIN MADOK, Clerk**

By: *Gandy Stancule*  
**Deputy Clerk**

**BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA**

By: *George R. Neugent*  
**Mayor**

FILED FOR RECORD  
2017 FEB 22 PM 5:03  
CLK. CIR. C.  
COUNTY CLERK

MONROE COUNTY ATTORNEY  
APPROVED AS TO FORM:  
*[Signature]*  
**ROBERT B. SHILLINGER, JR.**  
COUNTY ATTORNEY  
Date *2/21/17*  
*new per [unclear]*  
*1/31/17*

Attachment: FPL Turkey Point Units 3 and 4 Docket ID NRC-2018-0101 Monroe County, FI Comments 6/21/2018 (FKAA DEP FPL Turkey Point

# County of Monroe

The Florida Keys



### BOARD OF COUNTY COMMISSIONERS

Mayor George Neugent, District 2  
Mayor Pro Tem David Rice, District 4  
Danny L. Kolhage, District 1  
Heather Carruthers, District 3  
Sylvia J. Murphy, District 5

**Robert B. Shillinger, County Attorney\*\***  
Pedro J. Mercado, Assistant County Attorney \*\*  
Cynthia L. Hall, Assistant County Attorney \*\*  
Christine Limbert-Barrows, Assistant County Attorney \*\*  
Derek V. Howard, Assistant County Attorney\*\*  
Steven T. Williams, Assistant County Attorney\*\*  
Peter H. Morris, Assistant County Attorney  
Patricia Eables, Assistant County Attorney  
Chris Ambrosio, Assistant County Attorney

**Office of the County Attorney**  
1111 12<sup>th</sup> Street, Suite 408  
Key West, FL 33040  
(305) 292-3470 – Phone  
(305) 292-3516 – Fax

\*\* Board Certified in City, County & Local Govt. Law

August 30, 2017

Ms. Annette L. Vietti-Cook  
Secretary, U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Re: In the matter of Florida Power & Light Co., Turkey Point Units 6 & 7  
Docket 52-040-COL, 52-041-COL; CLI-17-01

Dear Ms. Vietti-Cook:

Florida Power and Light (FPL) has filed an application with the Nuclear Regulatory Commission seeking approval of a combined license (COL) to construct and operate two additional units (Units 6 & 7) at the Turkey Point site in Miami-Dade County, just over the border from Monroe County. Monroe County's interest in the COL is that the County's water supply wellfields are due west of Turkey Point and the waters of Biscayne Bay directly east of the plant are adjacent to the Monroe County line. The COL is valid for 40 years with the option of a 20-year renewal. Monroe County has reviewed the application submitted by FPL and offers the following comment.

As a preliminary matter, Monroe County adopts the comments previously submitted by Miami-Dade County and by the Florida Keys Aqueduct Authority. Copies of the comment letters submitted by each agency are attached and incorporated by reference as Exhibits A and B.

In addition, FPL has experienced difficulties in operating existing Units 1 through 5 at Turkey Point. One byproduct of FPL's current operation of the cooling canal system for the existing units is a saltwater plume which has placed the drinking water supply for Monroe County in jeopardy. Data has also shown that cooling canal system water has been detected in the waters of Biscayne Bay and that the groundwater plume extends to the east side of the plant. Complete remediation of this plume is critical to the continued safety of our water supply and the health of Biscayne Bay. These developments cause grave concerns to Monroe County as further set forth in Resolutions 87-2016 and 43-2017. Copies of both resolutions are attached and incorporated by reference as Exhibits C and D.

Attachment: Docket 52-040-COL Monroe County Comment Letter to NRC on FPL Application for Turkey Point Units 6 & 7 30 August 2017 (FKAA)

Monroe County Comment Letter  
August 30, 2017  
Page 2

Attachment: Docket 52-040-COL Monroe County Comment Letter to NRC on FPL Application for Turkey Point Units 6 & 7 30 August 2017 (FKAA

While Monroe County recognizes that FPL is in enforcement and remediation proceedings regarding their operations of the existing units, data to date has not affirmatively shown that FPL's proposed solutions and obligations are actually ameliorating the existing cooling canal system impacts. We also recognize that Units 6 and 7 will not rely on the cooling canal system technology to operate. That said, the new cooling technology for Units 6 & 7 proposed as part of this proceeding includes reclaimed water in conjunction with the use of wells that will draw groundwater from the east side of the plant. The spent cooling system water will ultimately discharge into deep injection wells on the west side of the plant. Given more current understanding of the extent of the eastern and western impacts of the existing cooling canal system, the permeability of the geology in the area and the withdrawal and disposal technologies proposed for the new cooling system to serve Units 6 & 7, we are concerned that there has not been adequate analysis of the relationship between the existing and proposed cooling systems.

In sum, Monroe County opposes NRC's granting FPL its requested license to build and operate Units 6 & 7 at Turkey Point until FPL fully addresses the problems associated with the operations of Units 1 through 5 including fully remediating the saltwater plume emanating from the cooling canals.

Respectfully submitted,



Robert B. Shillinger  
County Attorney

Enclosures (4)

**RESOLUTION NO. 043 - 2017**

**A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA SUPPORTING EFFORTS TO SEEK A COMMITMENT FROM FLORIDA POWER AND LIGHT TO DISCONTINUE USE OF THE COOLING CANAL SYSTEM AT THE TURKEY POINT NUCLEAR POWER PLANT AS SOON AS POSSIBLE; PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS**, The Florida Power and Light Turkey Point Nuclear Power Plant, located in south Miami-Dade County, utilizes a cooling canal system which consists of a network of approximately 5,900 acres of unlined canals; and

**WHEREAS**, The Florida Power and Light Turkey Point Nuclear Power Plant is the only facility in the world that uses a cooling canal system instead of mechanical draft cooling towers; and

**WHEREAS**, water from this cooling canal system communicates with the surrounding groundwater, and long-term monitoring data has shown that a hypersaline plume of water from the cooling canals has been migrating into and contaminating the groundwater, beyond the boundaries of the cooling canals; and

**WHEREAS**, Miami-Dade County took action to address this issue, including, but not limited to issuing a Notice of Violation in 2015 to Florida Power and Light for certain water quality violations in the groundwater, and requiring, through an administrative consent agreement, the Florida Power and Light take certain remedial actions to retract and contain the hypersaline ground water plume; and

**WHEREAS**, at that time, the issues were focused on the westward migration of the hypersaline ground water plume from the cooling canals, more recent water quality sampling has detected exceedances of water quality standards in certain surface water locations in or connected to Biscayne Bay, adjacent to and east of the cooling canal system; and

**WHEREAS**, this Board, the residents of Monroe County and members of the general public are concerned about these recent discoveries and potential impacts on Card Sound, Biscayne Bay, and the Florida Keys' drinking water supply, and such discoveries serve to highlight the challenges posed by the continued operation of the cooling canal system; and

**WHEREAS**, Florida Power and Light has a license from the federal government to operate the Turkey Point Power Plant units that use the cooling canal system until 2033; and

**WHEREAS**, this Board is seeking a commitment from Florida Power and Light to discontinue the use of the cooling canal system in favor of a more modern mechanical draft cooling tower system that would remove all future interactions with ground water and make use of Miami-Dade County's reuse water;

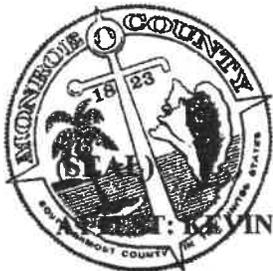
Attachment: Resolution 043-2017 Turkey Point Cooling Canals BOCC 2/15/2017 (FKAA DEP FPL Turkey Point intervention)

**NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA that:**

1. The Monroe County Board of County Commissioners seeks a commitment from Florida Power and Light to discontinue the use of the cooling canal system at its Turkey Point Nuclear Power Plant, as soon as possible, in favor of mechanical draft cooling towers.
2. This resolution shall take effect upon adoption.

**PASSED AND ADOPTED** by the Board of County Commissioners of Monroe County, Florida, at a regular meeting of said Board held on the 15<sup>th</sup> day of February, 2017.

<b>Mayor George Neugent</b>	<u>Yes</u>
<b>Mayor Pro Tem David Rice</b>	<u>Yes</u>
<b>Commissioner Danny Kolhage</b>	<u>Yes</u>
<b>Commissioner Heather Carruthers</b>	<u>Yes</u>
<b>Commissioner Sylvia Murphy</b>	<u>Yes</u>



By: Kevin Madok, Clerk  
Janalee Stanwick  
 Deputy Clerk

BOARD OF COUNTY COMMISSIONERS  
 OF MONROE COUNTY, FLORIDA  
 By: George E. Neugent  
 Mayor

FILED FOR RECORD  
 2017 FEB 22 PM 5:03  
 CLM, CIR, C, J  
 MONROE COUNTY, FLA

MONROE COUNTY ATTORNEY  
 APPROVED AS TO FORM:  
[Signature]  
 ROBERT B. SHILLINGER, JR.  
 COUNTY ATTORNEY  
 Date 2/21/17  
*name per link*  
 1/31/17

Attachment: Resolution 043-2017 Turkey Point Cooling Canals BOCC 2/15/2017 (FKAA DEP FPL Turkey Point intervention)

# County of Monroe

## The Florida Keys



### BOARD OF COUNTY COMMISSIONERS

Mayor Heather Carruthers, District 3  
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July 5, 2016

Mr. Jonathan Steverson, Secretary  
Florida Department of Environmental Protection  
Marjory Stoneman Douglas Building  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000

Re: Florida Power & Light Turkey Point Power Plant

Dear Mr. Steverson,

On behalf of the Monroe County Board of County Commissioners, I write to support recent efforts by the Department of Environmental Protection (“DEP”) and Miami Dade County regarding recent actions by both entities and Florida Power & Light, Inc. (“FPL”) to address environmental problems related to the Cooling Canal System (“CCS”) at Turkey Point.

Recently, DEP issued both a Notice of Violation and Orders for Corrective Action (OGC File No.: 16-0241) and a Warning Letter (#WL 16-000151W13SED) on April 25, 2016 to FPL raising concerns related to the unlined CCS and its direct connection to groundwater. “The CCS is a major contributing cause to the continuing western movement of the saline water interface” and there is “... compelling evidence that water originating from the CCS is reaching ... tidal surface water connected to Biscayne Bay.” These findings stem from a recent Final Order (Number 16-0111) and Miami-Dade County’s March 2016 “Report on Recent Biscayne Bay Water Quality Observations associated with Florida Power and Light Turkey Point Cooling Canal System Operations”. While there were several other findings in that Final Order and the Miami-Dade County Report, these illustrate two (2) of the most important findings regarding continued problems with the current operations of the CCS at Turkey Point. Without remedial action, these conditions could continue and become worse over time.

Monroe County is especially concerned with any remedial action to be implemented by FPL. First, the County’s only water supply, the Florida Keys Aqueduct Authority (“FKAA”) wellfield, is located 9.5 miles west of the CCS. Second, the County’s nearest residents in the Ocean Reef Club are located 3.5 miles southeast of the CCS.

Attachment: DEP Turkey Point Letter 06.23.2016 (FKAA DEP FPL Turkey Point intervention)

Monroe County has a mutual interest with DEP and Miami-Dade County in protecting the water supply of its residents, as well as the shared environmental and water resources currently jeopardized by the current operations of the CCS. At present, the hyper-saline plume extends approximately 2-3 miles west of the CCS and is continuing to move westward with the plume pushing the saline water interface at a rate of 400-600feet per year. The saline water interface is currently located 4-5 miles west of the CCS. We are also concerned that tritium has now been detected in tidal waters of Biscayne Bay because a portion of the Biscayne Bay Aquatic Preserve on the eastern side of Turkey Point is also located within Monroe County.

On April, 20, 2016, the Monroe County Board of County Commissioners passed a resolution expressing concern over Turkey Point and a desire to work collaboratively with Miami-Dade County and other agencies to protect the Florida Keys' water supply and Monroe County's environmental resources. The County passed this resolution in direct response to new data provided by Miami-Dade County in its March 7, 2016 Report.

This new data from the March 2016 Miami-Dade County Report must be considered as another basis for any remedial action to be implemented by FPL to address the CCS operations. Monroe County fully supports Miami-Dade County's October 2, 2015 Notice of Violation and Orders for Corrective Action which requires FPL to redress Miami-Dade County Code violations. The October 7, 2015 Consent Agreement with Miami-Dade County, which was designed to be a long-term plan to address CCS water quality issues, requires FPL to: 1) implement actions to abate water quality in the CCS to reduce the threat on adjoining water sources, and 2) remediate water quality impacts of the hyper-saline plume that has migrated landward beyond the FPL property. While the Consent Agreement addresses the landward migration of the hyper-saline plume, the Miami-Dade County Report indicates that further evaluation and action is necessary to fully address the leading edge of the saltwater and recently discovered surface water impacts tidally connected to Biscayne Bay.

As part of Consent Agreement requirements, FPL has begun to submit new modeling data and proposed remedial actions to address some of the issues raised by DEP and Miami-Dade County. Because the interconnectedness of the CCS to the groundwater beneath and surrounding groundwater and surface water is now documented, it is imperative that the remedial actions be comprehensive in nature and adequately address all of the water resources known to be impacted by the CCS. Monroe County supports a comprehensive remedial solution that will:

- 1) Stop and retract the western migration of the hyper-saline plume in the Biscayne Aquifer;
- 2) Remove the hyper-saline water that has moved beyond the boundaries of the CCS and FPL property;
- 3) Ensure the CCS discharges to groundwater do not move beyond the boundaries of the CCS and FPL property;
- 4) Stop any eastern movement of the hyper-saline discharges into any surface waters in, or connected to, Biscayne Bay; and
- 5) Remediate any impacts to Biscayne Bay.

FPL was late in delivering required plans for a Recovery Well System (RWS) for hypersaline remediation per the Consent Order. Their recent submittal, from its consultant, Tetra Tech, is under review; yet specific items have been identified for your consideration:

- FPL's proposed solution calls for 10 years to abate the negative impacts. Although Miami-Dade settled for such an extended timeline under the settlement agreement, it is not a judicious timeframe to remedy such known water quality violations. The proposed RWS is apparently sized based upon using an existing deep well injection system (DWI) which FPL installed with only 15 MGD capacity. With only 15 MGD of injection capacity, the RWS can only "recover" 15 MGD.
- For comparison, FPL commissioned a "Feasibility Study to Assess Engineering Options for Stopping Westward Migration of Saline Water and Decreasing CCS Concentrations, Turkey Point Plant, Florida" produced in 2010. In this plan, Tetra Tech, provided technical and cost input for

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RWS options sized at 50 to 100 MGD. Design criteria included an abatement timeline of 5 years. Therefore, any solution should be sized to address the actual extent of the problem.

It is critical to understand the information that has been submitted in order to determine if the model parameters are appropriate and if the model supports a comprehensive solution. Given DEP's role in enforcing Administrative Order 14 0741 (and now additionally Final Order Number 16-0111) and the requisite Salinity Management Plan required in both those orders, we support any efforts by DEP and Miami-Dade County to develop data to support a comprehensive solution. This data and the solution must expressly address the leading edge of the saltwater plume and whether or not the proposed extraction wells are adequate enough to halt the westward migration of the hyper-saline plume.

While it is critical to understand the modeling efforts for ensuring environmental improvements, it is just as important to begin action on efforts that have consensus from the experts. We recommend DEP set a date within the next 30 days to meet with the experts to discuss the issues and to find common ground upon which to move forward.

Monroe County is committed to working with all of the entities involved to find a successful solution to eliminate the risks posed by the current operation of the CCS. To that end, we want to remain involved in the issues directly affecting our residents and our water supply and in the review of data including proposed remedial actions submitted by FPL for approval by the appropriate agencies. Please consider Monroe County as a stakeholder directly impacted by decisions about the CCS at Turkey Point and include us in the dialogue (through notifications and/or correspondence methods) to pursue the resolution of the issues discussed above.

We are also in receipt of the recent Consent Order (State of Florida Department of Environmental Protection v. Florida Power & Light, Co. OGC File No. 16-0241), and while we have not thoroughly reviewed that Order yet, we are hopeful that this is another positive step towards a comprehensive solution that will stop the impacts to groundwater and surface water resources surrounding the Turkey Point facility. This Consent Order is particularly important as a continued enforcement tool that must emphasize controlling the salinity plume and its impact on saltwater intrusion. We reserve the right to respond to, and comment upon, that Consent Order at a future date once we have more thoroughly reviewed it.

We appreciate your consideration of our concerns and look forward to finding a solution that is protective of the County's residents and all of the environmental resources surrounding Turkey Point, including groundwater resources and Biscayne Bay.

Respectfully,

Roman Gastesi  
Monroe County Administrator

- Cc: Monroe County Mayor Heather Carruthers
- Monroe County Mayor Pro tem George Neugent
- Monroe County Commissioner Danny Kolhage
- Monroe County Commissioner David Rice
- Monroe County Commissioner Sylvia Murphy
- Monroe County Attorney Robert Shillinger
- Florida Keys Aqueduct Authority Board Chairman J. Robert Dean
- Florida Keys Aqueduct Authority Executive Director Kirk Zuelch
- Florida Keys Aqueduct Authority Deputy Executive Director Thomas Walker

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RESOLUTION NO. 087 - 2016

**A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA EXPRESSING ITS CONCERN OVER THE THREAT FLORIDA POWER & LIGHT COMPANY'S TURKEY POINT FACILITY'S COOLING CANAL SYSTEM POSES TO MONROE COUNTY'S SOURCE OF POTABLE WATER AND BISCAYNE BAY; EXPRESSING A DESIRE TO WORK COOPERATIVELY WITH MIAMI-DADE COUNTY AND OTHER AGENCIES WITH JURISDICTION TO PROTECT THE FLORIDA KEYS POTABLE WATER SUPPLY; ENCOURAGING THE FLORIDA KEYS AQUEDUCT AUTHORITY TO TAKE ALL STEPS NECESSARY TO PROTECT ITS WELLFIELDS IN FLORIDA CITY; DIRECTING THE CLERK TO DISTRIBUTE THE RESOLUTION; AND PROVIDING FOR AN EFFECTIVE DATE.**

**WHEREAS**, Monroe County is the southernmost county in the State of Florida and home to the world renown Florida Keys; and

**WHEREAS**, Monroe County shares a common boundary with Miami-Dade County which is approximately 152 miles<sup>i</sup> long; and

**WHEREAS**, the Florida Keys is home to approximately 75,000 full time residents plus several thousand part time residents many of whom reside full time in Miami-Dade County; and

**WHEREAS**, the Florida Keys Aqueduct Authority (FKAA) is the public entity created by the Legislature<sup>ii</sup> which has been vested with the responsibility for providing potable water to residents and businesses in the Florida Keys; and

**WHEREAS**, the FKAA draws potable water primarily from the Biscayne Aquifer through a wellfield located west of Florida City<sup>iii</sup> within Miami-Dade County; and

**WHEREAS**, Florida Power & Light Company (FPL) is the third-largest electric utility in the United States and provides powers to over 4.8 million customers<sup>iv</sup> in the state; and

**WHEREAS**, FPL owns and operates it's Turkey Point facility in southeast Miami-Dade County comprised of multiple power generating units; and

**WHEREAS**, the Turkey Point facility includes an approximately 5,900-acre network of unlined canals and an interceptor ditch on the western side of the network, or collectively the cooling canal system<sup>v</sup> (CCS), which dissipates heat from the water used in the operation of FPL's nuclear Units 3 and 4, as well as Unit 1 when in operation; and

**WHEREAS**, FPL's CCS is located at its closest point less than two miles from the Miami-Dade/Monroe County line and approximately 9.5 miles from the FKAA's wellfield in Florida City; and

Mayor Carruthers

**WHEREAS**, that while the CCS has no direct surface water discharges, data shows that water from the CCS has moved beyond its boundaries; and

**WHEREAS**, the hypersaline plume extends two or three miles west of the CCS and continues to move westward and the plume is pushing the saline water interface, which is now four or five miles west of the CCS, at the rate of 400 to 600 feet per year.<sup>vi</sup>; and

**WHEREAS**, Monroe County supports Miami-Dade County's Division of Environmental Resources Management (DERM) for issuing a Notice of Violation and Orders for Corrective Action (October 2, 2015) against FPL to redress alleged violations of the Miami-Dade County Code involving the CCS and entering into a Consent Agreement with FPL on October 6, 2015 to resolve those violations; and

**WHEREAS**, Miami-Dade County recently issued a Report<sup>vii</sup> on March 7, 2016 indicating that:

- a. the long term water quality in the CCS is degrading;<sup>viii</sup>
- b. water from the CCS is migrating outside its boundaries away from the Turkey Point facility property with impacts measured in both surface and groundwater;<sup>ix</sup>
- c. monitoring data indicate that a hyper-saline groundwater plume originating from the CCS has migrated landward and is impacting water quality;<sup>x</sup>
- d. results for recent tritium sampling (an isotope of hydrogen that is frequently associated with the operation of nuclear power plants) provide the most compelling evidence that water originating from the CCS is reaching tidal surface waters connected to Biscayne Bay;<sup>xi</sup> and
- e. rainfall, pumping additional water into the CCS and operations of the CCS Interceptor Ditch lead to record high water stage in the CCS which would be expected to result in increased seepage of water from the CCS into surrounding ground waters and perhaps surface waters.<sup>xii</sup>

**WHEREAS**, Monroe County is concerned that the westward migrating hypersaline plume in the Biscayne Aquifer places the Florida Keys' source of potable water in jeopardy; and

**WHEREAS**, Monroe County is also concerned that the eastern migration of the hypersaline plume into the tidal surface waters connected to Biscayne Bay (and potentially the Biscayne Bay Aquatic Preserve) places these water resources in jeopardy where Monroe County citizens fish and recreate; and

**WHEREAS**, Monroe County is working to gain a full understanding of all the solutions being proposed by DERM and the other agencies with jurisdiction over Turkey Point and the CCS including, but not limited to, the Florida Department of Environmental Protection (DEP), the South Florida Water Management District (SFWMD) and the Nuclear Regulatory Commission (NRC); and

**WHEREAS**, Monroe County desires to work cooperatively with Miami-Dade County leadership and other agencies with jurisdiction over Turkey Point and the CCS to ensure that the FKAA's wellfields are protected to the maximum extent possible now and in the future; and

