

# 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,

A handwritten signature in blue ink, appearing to read "David Rice", is written over a faint, illegible printed name.

Mayor David Rice  
Monroe County Board of County Commissioners

Enclosures (2)

**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>1</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**

**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

**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 FKAA 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 FKAA's wellfields; and

**WHEREAS**, Monroe County reserves its right to initiate the conflict resolution provisions of the Florida Governmental Conflict Resolution Act<sup>xxx</sup> and to bring an action under the Florida Environmental Protection Act<sup>xy</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 FKAA 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 FKAA 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  
 Mayor pro tem George Neugent  
 Commissioner Danny L. Kolhage  
 Commissioner David Rice  
 Commissioner Sylvia Murphy

Yes  
Not Present  
Yes  
Yes  
Yes



AMY HEAVILIN, CLERK

A. Robertson  
 Deputy Clerk

BOARD OF COUNTY COMMISSIONERS OF MONROE COUNTY, FLORIDA

By: [Signature]  
 Mayor Heather Carruthers

MONROE COUNTY ATTORNEY  
 APPROVED AS TO FORM:  
[Signature]  
 ROBERT B. SHILLINGER, JR.  
 COUNTY ATTORNEY  
 Date 4-19-16

<sup>1</sup> Per Brian Davison, 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  
 CLK. CIR. CL.  
 MONROE COUNTY, FLA

**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;

**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>



**VIN MADOK, Clerk**

By: \_\_\_\_\_

*Family Hancock*

**Deputy Clerk**

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

By: \_\_\_\_\_

*George L. Neugent*

**Mayor**

CLK. CIR. CL.  
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FILED FOR RECORD

**MONROE COUNTY ATTORNEY APPROVED AS TO FORM:**

*[Signature]*  
**ROBERT B. SHILLINGER, JR.**  
**COUNTY ATTORNEY**

Date *2/21/17*

*name per link*  
*1/31/17*