UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 28, 2014

Mr. Mano Nazar
President and Chief Nuclear Officer
Nuclear Division
NextEra Energy
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4 – ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT RELATED TO THE ULTIMATE HEAT SINK TEMPERATURE LIMIT (TAC NOS. MF4392 AND MF4393)

Dear Mr. Nazar:

The U.S. Nuclear Regulatory Commission has forwarded the enclosed Notice of Issuance of an Environmental Assessment and Finding of No Significant Impact to the Office of the Federal Register for publication. The notice relates to your application dated July 10, 2014, as supplemented by letter dated July 17, 2014, two letters dated July 22, 2014, and letter dated July 24, 2014 (Agencywide Documents Access and Management System Accession Nos. ML14196A006, ML14202A392, ML14204A368, ML14204A367, and ML14206A853 respectively), in which you requested that the ultimate heat sink water temperature limit and associated surveillance requirements in the Turkey Point Technical Specifications be revised.

If you have any questions, please contact me at (301) 415-0489.

Sincerely,

Audrey L. Klett, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosure:
Notice of Environmental Assessment and
Finding of No Significant Impact

cc w/encl: Distribution via Listserv

[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50–250 and 50–251; NRC–2014–0181]

Florida Power & Light Company;

Turkey Point Nuclear Generating Unit Nos. 3 and 4

AGENCY: Nuclear Regulatory Commission.

ACTION: Environmental assessment and final finding of no significant impact; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of amendments to Renewed Facility Operating License Nos. DPR-31 and DPR-41 issued to Florida Power & Light Company (FPL, the licensee) for operation of Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point) located in Homestead, Miami-Dade County, Florida. The proposed amendments would increase the ultimate heat sink (UHS) water temperature limit specified in the Turkey Point Technical Specifications (TSs) from 100 degrees Fahrenheit (°F) to 104 °F and add a surveillance requirement to monitor the UHS temperature more frequently if the UHS temperature approaches the new limit. The NRC did not identify any significant environmental impacts associated with the proposed license amendments based on its evaluation of the information provided in the licensee's application and other available information. Accordingly, the NRC has prepared this Environmental Assessment (EA) and Final Finding of No Significant Impact (FONSI) for the proposed license amendments.

ADDRESSES: Please refer to Docket ID NRC–2014–0181 when contacting the NRC about the availability of information regarding this document. You may access publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Web site:** Go to http://www.regulations.gov and search for Docket ID NRC–2011–0181. Address questions about NRC dockets to Carol Gallagher; telephone: 301-287-3422; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the NRC Public Documents collection at http://www.nrc.gov/reading-rm/adams.html. To begin the search, select "ADAMS Public Documents" and then select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced in this notice (if that document is available in ADAMS) is provided the first time that a document is referenced. For the convenience of the reader, the ADAMS accession numbers are also provided in a table in the "Availability of Documents" section of this document.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Audrey L. Klett, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-0489; e-mail: Audrey.Klett@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Introduction

The NRC is considering issuance of amendments to Renewed Facility Operating License Nos. DPR-31 and DPR-41 issued to FPL for operation of Turkey Point, located in Homestead, Miami-Dade County, Florida. As required by § 51.21 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 51.21), the NRC staff performed an EA to document its findings related to the proposed license amendments. FPL submitted its license amendment request by letter dated July 10, 2014 (ADAMS Accession No. ML14196A006) and subsequently supplemented its application by letters dated July 17, 2014 (ADAMS Accession No. ML14202A392), July 22, 2014 (ADAMS Accession Nos. ML14204A367 and ML14204A368), and July 24, 2014 (ADAMS Accession No. ML14206A853). Based on information provided in FPL's application and associated supplements, the NRC staff's independent review, and the NRC's consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973, as amended (ESA), the NRC did not identify any significant environmental impacts associated with the proposed license amendments.

Based on the results of the EA documented herein, the NRC is issuing this final FONSI, in accordance with 10 CFR 51.32, for the proposed license amendments.

II. Environmental Assessment

Plant Site and Environs

The Turkey Point site encompasses 11,000 acres (ac) (4,450 hectares (ha)) in Miami-Dade County, Florida. The site lies 25 miles (mi) (40 kilometers [km]) south of Miami, Florida,

and the nearest city limits are Florida City, which lies 8 mi (13 km) to the west, Homestead, which lies 4.5 mi (7 km) to the northwest, and Key Largo, which lies 10 mi (16 km) south of the Turkey Point site. The Turkey Point site is bordered to the east by Biscayne National Park, to the north by Homestead Bayfront Park and a portion of Biscayne National Park, and on the west and south by FPL's 13,000-ac (5,260-ha) Everglades Mitigation Bank. The Turkey Point site includes five electric generating units. Units 1, 2, and 5 are fossil-fueled generating units and are not covered by the proposed licensing action; Units 3 and 4 are nuclear generating units. Each nuclear reactor is a Westinghouse pressurized light-water reactor that generates electricity via three steam generators that produce steam that turns turbines. The site features a 6,100-ac (2,500-ha) closed cooling canal system (CCS) that cools heated water discharged by Units 1 through 4. Unit 5 uses mechanical draft cooling towers for cooling, draws makeup water from the Upper Floridan Aquifer, and discharges blowdown to the CCS. The five units and supporting equipment (excluding the CCS) occupy approximately 130 ac (53 ha).

The U.S. Atomic Energy Commission (AEC), the NRC's predecessor agency, and the NRC have previously conducted environmental reviews of Turkey Point in several documents, and the descriptions therein continue to accurately depict the Turkey Point site and environs. Those documents include the AEC's July 1972 Final Environmental Statement (FES); the NRC's January 2002 Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Turkey Point Units 3 and 4—Final Report (NUREG-1437, Supplement 5) (ADAMS Accession No. ML020280236); and the NRC's March 2012 environmental assessment and final FONSI for the Turkey Point extended power uprate (EPU) (ADAMS Accession No. ML12074A251).

Identification of the Proposed Action

The proposed action would increase the UHS water temperature limit specified in the Turkey Point TSs and add a surveillance requirement to monitor the UHS temperature more frequently if the UHS temperature approaches the new limit. The proposed action is in accordance with the licensee's application dated July 10, 2014, as supplemented by letters dated July 17, July 22 (two letters), and July 24, 2014.

More specifically, the proposed action would amend Appendix A of Turkey Point's Renewed Facility Operating Licenses in order to revise the UHS temperature limit set forth in TS Limiting Operating Condition (LOC) 3/4.7.4 from 100 °F to 104 °F. The CCS serves as the UHS for the Intake Cooling Water (ICW) system and provides the coolant for the Circulating Water (CW) system. The CW system provides cooling water to the main plant condensers, and the ICW system removes heat loads from the Component Cooling Water (CCW) system during normal and accident conditions to support both reactor and containment heat removal requirements as well as spent fuel cooling requirements.

Currently, TS LOC 3/4.7.4 includes a Surveillance Requirement (SR) that necessitates the licensee to verify the UHS (CCS) temperature once every 24-hour period and confirm that the average supply water temperature is within the 100°F limit. The proposed license amendments would modify the SR to require the licensee to verify the average supply water temperature to be within the new TS limit at least once per 24 hours, and once per hour when the water temperature exceeds 100 °F. FPL monitors the UHS (CCS) temperature at a point in the ICW system piping going into the inlet of the CCW Heat Exchangers.

The license amendment would require the licensee to place both units in at least hot standby within 12 hours and cold shutdown within the next 30 hours if the UHS exceeds 104 °F.

The proposed TS revisions would not result in or require any physical changes to Turkey Point systems, structures, or components, including those intended for the prevention of accidents. If approved, the LAR would be effective from the date of NRC approval through the expiration dates of the renewed facility operating licenses (i.e., through 2032 for Unit 3 and 2033 for Unit 4).

The Need for the Proposed Action

The proposed action is needed to provide FPL with additional operational flexibility during periods when high air temperatures, low rainfall, and other factors contribute to conditions resulting in a UHS temperature in excess of 100 °F that would otherwise necessitate FPL to place Turkey Point in cold shutdown. In its application, FPL states that loss of load and voltage control resulting from shutdown during periods of high summer demand could result in impacts to grid reliability. UHS temperatures have recently approached and exceeded the 100 °F TS limit on several occasions. On July 20, 2014, the NRC approved a notice of enforcement discretion (NOED), which allows the UHS temperature to exceed 100 °F up to 103 °F for a period of no more than 10 days, as well as several other NOED exit criteria. The NRC documented the NOED in a letter to FPL dated July 23, 2014 (ADAMS Accession No. ML14204A652).

Environmental Impacts of the Proposed Action

As part of the original licensing review for Turkey Point, the AEC published an FES in July 1972 that evaluates potential environmental impacts associated with the operation of Turkey Point over its initial 40-year operating period (1972–2012 for Unit 3 and 1973–2013 for Unit 4). In 2002, the NRC evaluated the environmental impacts of operating Turkey Point for an

additional 20 years beyond the original operating license (i.e., through 2032 for Unit 3 and 2033 for Unit 4) and predicted that the environmental impacts of license renewal were small for all environmental resources. NUREG-1437, Supplement 5 provides that assessment. In 2012, the NRC evaluated the impacts of a then-proposed EPU at Turkey Point that authorized the facility to increase the maximum power level from 2300 megawatts thermal (MWt) to 2644 MWt for each unit. The NRC's March 2012 EA and final FONSI provide that assessment.

As previously discussed, the proposed action would not result in or require any physical changes to Turkey Point systems, structures, or components, including those intended for the prevention of accidents. Further, the proposed license amendments involve TS changes that would only result in changes in procedural and operational aspects undertaken by FPL personnel for monitoring and maintaining the UHS temperature limit as measured at the ICW system piping going into the inlet of the CCW Heat Exchangers. Thus, FPL's workforce would not change, and the regular operations workforce would otherwise be unaffected by the proposed action. Based on the above and the available information reviewed by the staff, the NRC concludes that the proposed action would result in no significant impact on land use, visual resources, air quality, noise, the geologic environment, groundwater resources, terrestrial resources, historic and cultural resources, socioeconomic conditions including minority and low income populations (environmental justice), or waste generation and management activities. Therefore, this environmental assessment does not prevent any further evaluation of the operational impacts on these environmental resources. The NRC previously assessed the environmental impacts of continued operations of Turkey Point in NUREG-1437, Supplement 5 and the EA and final FONSI for the EPU, and implementation of the proposed license amendments would not result in any impacts beyond those already characterized in these documents. Accordingly, this environmental assessment focuses on the environmental

resources that could be affected by the change in the CCS thermal limit: surface water resources, aquatic resources, and Federally-protected species and habitats. Radiological impacts are also addressed.

The details of the NRC staff's safety evaluation will be separately provided in the license amendment package issued to approve the license amendment, if granted.

Nonradiological Impacts

Surface Water Resources:

The Turkey Point site lies on the shore of Biscayne Bay. South of the site, Mangrove Point divides the bay from Card Sound. Biscayne Bay and Card Sound are shallow, subtropical estuarine waters located between the Atlantic coast mainland and a grouping of barrier islands that form the northernmost Florida Keys. The Atlantic Ocean lies beyond the barrier islands. The Intracoastal Waterway traverses Biscayne Bay and Card Sound, and a barge passage runs from the Intracoastal Waterway to the non-nuclear units on the Turkey Point site.

In addition to these offsite waters, the site includes several manmade surface waters, the most significant of which is the CCS. The CCS spans a 6,100-ac (2,500-ha) area (4,370 ac (1,770 ha) of surface water) spread over a 5-mi by 2-mi (8-km by 3.2-km) area. The system includes 168 mi (270 km) of earthen canals with an average depth of 2.8 ft (0.8 km) and contains approximately 4 billion gallons (12,300 acre-feet) of water. The Turkey Point units (both nuclear Units 3 and 4 and fossil-fueled Units 1 and 2) use the CCS like a radiator and, as previously mentioned, the CCS serves as the UHS for Units 3 and 4. Heated water discharges into the CCS at one end, flows through the canal system, and is withdrawn from the other end for reuse as cooling water. The heated discharge effluent is distributed to 32 feeder canals. Water in the feeder canals flows south and discharges into a single collector canal that

distributes water to six return canals. Water in the return canals flows north to the plant intake. The entire circuit that water travels from plant discharge back to plant intake is 13.2 mi (21.2 km), and transit time through the system is approximately 44 hours. Water flows attributable to Units 3 and 4 amount to approximately 1.0 million gallons per minute. Temperature rise across the plant (from intake to discharge) averages 15 to 30 °F depending on the number of fossil and nuclear units in operation, unit load, and various other factors. The average intake temperature is 2.5 °F above the average ambient air temperature. Rainfall, stormwater runoff, and groundwater exchange replace evaporative losses.

The Florida Department of Environmental Protection (FDEP) has issued FPL a "No Discharge" National Pollutant Discharge Elimination System (NPDES) permit (No. FL0001562) to operate the CCS as an industrial wastewater facility. Accordingly, the CCS does not discharge directly to fresh or marine surface waters. The proposed action would not require FPL to request modifications to the NPDES permit because the plant discharge limits would not change. Plant discharge limits are not intake-temperature limited; rather, they are a function of the quantity of heat rejected to the CCS during plant operation.

Under the proposed action, 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. Temperature 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). No other onsite or offsite waters would be affected by the proposed UHS temperature limit increase.

Because the proposed action would only affect the CCS, and the CCS is a manmade closed cycle cooling system, the NRC concludes that the proposed action would not result in significant impacts to surface water resources.

Aquatic Resources:

As determined in the previous section, the CCS is the only surface water that would be affected by the proposed action. Accordingly, this section only addresses aquatic resources in the CCS.

The CCS supports a variety of aquatic species typical of shallow, subtropical waters, including phytoplankton, zooplankton, marine algae, rooted plants, crabs, and estuarine fish. Because of high water temperatures and salinity content of the CCS, the resident fish assemblage is dominated by species adapted to living in harsh conditions, such as sheepshead minnow (*Cyprinodon variegatus*) and several *Fundulus* species. The CCS is owner-controlled and closed to the public; thus, fish and other aquatic biota in the CCS do not carry any commercial or recreational value.

Because aquatic organisms in the cooling canal system are unable to travel to or from Biscayne Bay, Card Sound, or any other natural water body, changes to the conditions within the CCS would not affect any aquatic populations in the surrounding natural aquatic habitats of Biscayne Bay, Card Sound, or the Atlantic Ocean. Therefore, the NRC staff concludes that the proposed action would result in no significant impact to aquatic resources.

Federally Protected Species and Habitats:

The Turkey Point site is home to a resident population of Federally-threatened American crocodiles (*Crocodylus acutus*). Crocodiles discovered and colonized the Turkey Point CCS following plant construction in the 1970s, and the site now hosts approximately one-third to one-half of the United States breeding population. In 1977, the FWS designated an area of Florida

that includes the majority of the Turkey Point site (including the CCS) as critical habitat for the species under the ESA. FPL maintains a crocodile management plan that prescribes how CCS maintenance procedures shall be conducted to minimize nest, hatchling, or adult disturbance. FPL also maintains a crocodile monitoring program to document breeding success and survival on the site.

As a Federal agency, the NRC must comply with the ESA as part of any action it authorizes, funds, or carries out, such as the proposed action evaluated in this environmental assessment. Under ESA section 7, the NRC must consult with the FWS and the National Marine Fisheries Service, as appropriate, to ensure that the proposed agency action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. The ESA and the regulations that implement ESA section 7 (50 CFR Part 402) describe the consultation process that Federal agencies must follow in support of agency actions.

Based on a review of the proposed action, the NRC staff has determined that the American crocodile is the only Federally-listed species that has the potential to be affected by the proposed action. Pursuant to ESA section 7, NRC staff consulted with FWS staff at the South Florida Ecological Services Office in Vero Beach, Florida. The NRC staff prepared a biological assessment (ADAMS Accession No. ML14206A806) that considers the potential for the proposed action to reduce hatchling survival, alter crocodile growth rates, and reduce habitat availability and concludes that the proposed action is not likely to adversely affect the American crocodile and would have no effect on the species' designated critical habitat. Based on the NRC staff's biological assessment determinations, the NRC concludes that the proposed action would have no significant impact on Federally-protected species or habitats.

In a July 25, 2014 letter (ADAMS Accession No. ML14206A800), the NRC requested consultation.

Radiological Impacts

The proposed action would not result in or require any physical changes to Turkey Point systems, structures, or components, including those intended for the prevention of accidents because the proposed license amendments involve TS changes that would only result in changes in procedural and operational aspects undertaken by FPL personnel for monitoring and maintaining the increased allowable UHS temperature limit. Thus, the proposed action would not have a significant adverse effect on the probability of an accident occurring or result in an increased radiological hazard beyond those analyzed in the licensee's Updated Final Safety Analysis Report. The proposed action would result in no changes to radiation levels or the types or quantities of radioactive effluents (gaseous or liquid) that affect radiation exposures to members of the public or plant workers. No changes or different types of radiological impacts would be expected from the proposed action. Therefore, the radiological impacts of granting the license amendments would result in no significant impact on the radiological environment.

Cumulative Impacts

The Council on Environmental Quality defines cumulative impacts under the National Environmental Policy Act of 1969, as amended (NEPA) as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions (40 CFR Part 1508.7). For the purposes of this analysis, past actions are related to the resource conditions when Turkey Point was licensed and

constructed; present actions are related to the resource conditions during current operations; and future actions are those that are reasonably foreseeable through the expiration of Turkey Point's renewed facility operating licenses. In the preceding sections of this EA, the NRC has determined that the proposed action has the potential to only affect surface water resources and aquatic resources in the CCS and Federally protected species and habitats (i.e., the site's resident population of American crocodiles and its designated critical habitat). This EA also addresses radiological impacts of the proposed action. Accordingly, this section only addresses the cumulative impacts that could result from the proposed action and other actions on these resources. The proposed action would have no effect on the remaining resources (i.e., land use, visual resources, air quality, noise, the geologic environment, groundwater resources, terrestrial resources, historic and cultural resources, socioeconomic conditions including minority and low income populations (environmental justice), and waste generation and management activities), and thus, cumulative impacts would not occur for these environmental resources.

The NRC staff has identified several actions that may contribute to cumulative effects; each of these actions is described separately below.

CCS Chemical Treatments:

In 2011, FPL began to notice increased blue green algae concentrations in the CCS. The concentrations have steadily increased since that time. FPL has performed engineering and environmental analyses and believes that the presence of higher than normal CCS algae concentrations may be diminishing the CCS's heat transfer capabilities. FPL developed a plan to gradually reduce algae concentrations through controlled chemical treatment of the CCS over the course of several weeks. On June 18, 2014, FPL submitted a request to the FDEP to approve the use of copper sulfate, hydrogen peroxide, and a bio-stimulant to treat the algae

(letter contained in Appendix A of ADAMS Accession No. ML14206A806). On June 27, 2014, the FDEP approved FPL's treatment plan for a 90-day trial period (letter contained in Appendix A of ADAMS Accession No. ML14206A806). The FDEP requested that during the 90-day treatment period, FPL monitor the CCS for total recoverable copper and dissolved oxygen and submit its results to the FDEP. The FDEP also recommended that FPL coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) due to the presence of crocodiles in the cooling system. The FWC provided its comments on FPL's treatment plan in a letter dated July 1, 2014 (letter contained in Appendix A of ADAMS Accession No. ML14206A806).

The CCS chemical treatments have the potential to contribute to cumulative effects on CCS surface water resources, CCS aquatic resources, and the American crocodile. Because the CCS is a manmade closed cycle cooling system, treatment of the CCS is not likely to have a significant cumulative effect on surface water resources. Monitoring required by the FDEP will ensure adequate water quality throughout and following treatment. Monitoring will also ensure that any unanticipated effects on the aquatic organisms that inhabit the CCS are appropriately addressed. During the treatment period, FPL has agreed to report any potentially related fish kills in the CCS to the FWC. No fish kills have been reported to date. Regarding crocodiles, the NRC's July 25, 2014, biological assessment notes that FPL has not observed any behavioral or distributional changes or any other noticeable differences that would indicate effects to crocodiles resulting from either the presence of higher algae concentrations or the recent chemical treatments.

Aquifer Withdrawals:

The CCS is situated above two aquifers: the shallower saltwater Biscayne Aquifer and the deeper brackish Floridan Aquifer. A confining layer separates the two aquifers from one another. Turkey Point, Unit 5 uses the Floridan Aquifer for cooling water. 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 Biscayne Bay (about 34 parts per thousand [ppt]). Such withdrawals could also help moderate water temperatures.

The current and anticipated future aquifer withdrawals have the potential to contribute to cumulative effects on CCS surface water resources, CCS aquatic resources, and crocodiles. Because the CCS is a manmade closed cycle cooling system, aquifer withdrawals are not likely to have a significant cumulative effect on surface water resources. Aquifer withdrawals would result in beneficial impacts to CCS aquatic resources and the crocodiles inhabiting the Turkey Point site. FPL anticipates that the withdrawals will reduce the salinity of the CCS to about 34 ppt and could also help moderate CCS temperatures over the long term. Both of these effects would create favorable conditions for CCS aquatic biota and crocodiles, which are currently tolerating an unusually hot, hypersaline environment.

Turkey Point, Units 6 and 7 Construction and Operation:

In June 2009, FPL submitted a combined license application (COLA) (ADAMS Accession No. ML091830589) to construct and operate two Westinghouse Advanced Passive 1000 (AP1000) pressurized-water reactors designated as Turkey Point, Units 6 and 7.

Submission of the COLA does not commit FPL to build two new nuclear units and does not constitute approval of the proposal by the NRC; however, submission of the COLA infers that the construction and operation of the new units is a reasonably foreseeable future action. The COLA will be evaluated on its merits, and the NRC will decide whether to grant the licenses after considering and evaluating the environmental and safety implications of the proposal. Environmental impacts of constructing and operating Turkey Point, Units 6 and 7 will depend on their actual design characteristics, construction practices, and power plant operations. These impacts will be assessed by the NRC in a separate NEPA document. The cumulative impacts presented in this EA may differ from those impacts assessed for the COLA. Potential impacts presented below have been drawn from FPL's Turkey Point, Units 6 and 7 Environmental Report, Revision 5 (ADAMS Accession No. ML13357A435), and NRC's 2012 EA and final FONSI for the EPU.

Of the environmental resources affected by the proposed action, the possible construction and operation of Units 6 and 7 only have the potential to contribute to cumulative radiological impacts. Units 6 and 7 would not use the CCS for cooling. Rather, Units 6 and 7 would have a closed-cycle cooling system with mechanical draft cooling towers. The cooling towers would draw makeup from Miami-Dade Water and Sewer Department reclaimed water and would discharge blowdown into deep injection wells. Saltwater extracted from Biscayne Bay subsurface sediment through radial collector wells proposed to be built on the Turkey Point site would serve as a secondary source of makeup water when a sufficient quantity and/or quality of reclaimed water is not available. Because Units 6 and 7 would not use the CCS, the proposed new units would not have a cumulative effect on CCS surface water resources or CCS aquatic resources.

Accordingly, the NRC will not address cumulative impacts of Units 6 and 7 on the American crocodile in this EA because the NRC's issuance of a license to construct and operate Units 6 and 7 is a separate Federal activity that will require future consultation.

Regarding cumulative radiological impacts, the NRC and Environmental Protection Agency have developed radiological dose limits for protection of the public and workers that address the cumulative effects of acute and long-term exposure to radiation and radioactive material. These dose limits are specified in 10 CFR Part 20 and 40 CFR Part 190.

The cumulative radiation dose to the public and workers is required to be within the regulations cited above. The public dose limit of 25 millirem (0.25 millisieverts) in 40 CFR Part 190 applies to all reactors that may be on a site and also includes any other nearby nuclear power reactor facilities. The NRC staff reviewed several years of radiation dose data contained in the licensee's annual radioactive effluent release reports for Turkey Point, and the data demonstrate that the dose to members of the public from radioactive effluents is within the limits of 10 CFR Part 20 and 40 CFR Part 190. As previously indicated in the "Radiological Impacts" section of this environmental assessment, the proposed action would result in no changes to radiation levels or the types or quantities of radioactive effluents (gaseous or liquid) that affect radiation exposures to plant workers and members of the public.

FPL's COLA for Units 6 and 7 contains an assessment of the radiation doses to members of the public from the proposed new reactors and concludes that doses would be within regulatory limits. The staff expects continued compliance with regulatory dose limits during operation of Turkey Point, Units 3 and 4 under the proposed action. Therefore, the NRC staff concludes that the cumulative radiological impacts to members of the public that could result from the combined operations of Turkey Point, Units 3 and 4 and the proposed new Units 6 and 7 would result in no significant impact on the environment.

Regarding radiation dose to workers, cumulative dose would only be applicable for those workers that would be engaged at both facilities (i.e., the currently operating Units 3 and 4 and proposed new Units 6 and 7). For Units 3 and 4, the licensee has a radiation protection program that maintains worker doses within the dose limits in 10 CFR Part 20 during all phases of operations. Operation of Units 6 and 7 would require a similar radiation protection program, and the licensee would be responsible for ensuring that workers are not exposed to dose limits above those specified in 10 CFR Part 20. Therefore, the NRC staff concludes that the cumulative radiological impacts to plant workers that could result from the combined operations of Turkey Point, Units 3 and 4 and the proposed new Units 6 and 7 would result in no significant impact on the radiological environment.

Cumulative Impacts Conclusion:

The NRC staff considered the cumulative impacts of CCS chemical treatments, current and anticipated future aquifer withdrawals, and the possible future construction and operation of two new nuclear units on the Turkey Point site. Based on the information presented in this section, the NRC staff concludes that the proposed action, in combination with other cumulative actions, would result in no significant cumulative impacts on the environment.

Alternatives to the Proposed Action

As an alternative to the proposed action, the NRC staff considered denial of the proposed license amendments (i.e., the "no-action" alternative). Denial of the application would result in no change in current environmental conditions or impacts. However, denial would result in reduced operational flexibility and could require FPL to derate or shutdown Turkey Point if the UHS average supply water temperature approaches or exceeds the 100 °F TS limit.

In its application, FPL states that loss of load and voltage control resulting from such a shutdown during periods of high summer demand could result in impacts to grid reliability.

Alternative Use of Resources

The action does not involve the use of any different resources than those previously considered in NUREG-1437, Supplement 5 prepared for license renewal of Turkey Point.

Agencies and Persons Consulted

On July 28, 2014, the NRC staff notified the Florida State official, Ms. Cindy Becker, Chief of Bureau of Radiation Control, of the Florida Department of Health, regarding the environmental impacts of the proposed action. The State official had no comments.

The NRC staff also coordinated with the FWS pursuant to consultation under ESA section 7 during the staff's review of the proposed action. The consultation is further discussed under the "Federally-Protected Species" section of this environmental assessment.

III. Finding of No Significant Impact

The NRC is considering issuing amendments for Renewed Facility Operating License Nos. DPR–31 and DPR–41, issued to FPL for operation of Turkey Point to increase the UHS water temperature limit specified in the Turkey Point TSs from 100 °F to 104 °F and add an SR to monitor the UHS temperature more frequently if the UHS temperature approaches the new limit.

On the basis of the EA included in Section II above and incorporated by reference in this finding, the NRC concludes that the proposed action would not have significant effects on the quality of the human environment. The proposed action would result in no significant impacts

on surface water resources, aquatic resources, or the radiological environment. In addition, the proposed action is not likely to adversely affect any Federally-protected species or affect any designated critical habitat. The proposed action would also not result in significant cumulative impacts on any environmental resources. The NRC's evaluation considered information provided in the licensee's application and associated supplements; the NRC's staff independent review of other environmental documents, and coordination with the FWS pursuant to consultation under ESA section 7. Section IV below lists the environmental documents related to the proposed action and includes information on the availability of these documents. Based on its findings, the NRC has decided not to prepare an environmental impact statement for the proposed action.

IV. Availability of Documents

The following table identifies the environmental and other documents cited in this document and related to the NRC's FONSI. These documents are available for public inspection online through ADAMS at http://www.nrc.gov/reading-rm/adams.html or in person at the NRC's PDR as described previously.

DOCUMENT	ADAMS ACCESSION NO.
Documents Related to License Amendment Request	
Florida Power & Light Company. License Amendment Request No. 231, Application to Revise Technical Specifications to Revise Ultimate Heat Sink Temperature Limit. Dated July 10, 2014.	ML14196A006
Florida Power & Light Company. License Amendment Request No. 231, Application to Revise Ultimate Heat Sink Temperature Limit – Request for Emergency Approval. Dated July 17, 2014.	ML14202A392

DOCUMENT	ADAMS ACCESSION NO.
U.S. Nuclear Regulatory Commission. Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393). [1 of 2] Dated July 18, 2014.	ML14203A614
U.S. Nuclear Regulatory Commission. Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393). [2 of 2] Dated July 18, 2014.	ML14203A618
Florida Power & Light Company. License Amendment Request No. 231, Application to Revise Ultimate Heat Sink Temperature Limit – Supplement 1, and Response to Request for Additional Information. Dated July 22, 2014.	ML14204A367
Florida Power & Light Company. Response to Request for Additional Information Regarding License Amendment Request No. 231, Application to Revise Technical Specifications to Revise Ultimate Heat Sink Temperature Limit. Dated July 22, 2014.	ML14204A368
U.S. Nuclear Regulatory Commission. Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393). Dated July 22, 2014.	ML14204A814
U.S. Nuclear Regulatory Commission. Notice of Enforcement Discretion for Florida Power & Light Company Regarding Turkey Point Nuclear Generating Unit Nos. 3 and 4 [NOED NO. 14-2-001]. Dated July 23, 2014.	ML14204A652
Florida Power & Light Company. Response to Containment and Ventilation Branch Request for Additional Information, Regarding License Amendment Request No. 231, Application to Revise Ultimate Heat Temperature Limit. Dated July 24, 2014.	ML14206A853

DOCUMENT	ADAMS ACCESSION NO.
Florida Power & Light Company. Turkey Point Nuclear Generating Unit Nos. 3 and 4 – Individual Notice of Consideration of Issuance of Amendments to Renewed Facility Operating Licenses, Proposed No Significant Hazards Consideration Determination, and Opportunity for Hearing (Exigent Circumstances) (TAC Nos. MF4392 and MF4293). Dated July 24, 2014.	ML14204A129 (letter) ML14199A111 (enclosure)
U.S. Nuclear Regulatory Commission. Request to Reinitiate Informal Consultation for a Proposed License Amendment to Increase the Ultimate Heat Sink Temperature Limit at Turkey Point Nuclear Generating Unit Nos. 3 and 4. Dated July 25, 2014.	ML14206A800
U.S. Nuclear Regulatory Commission. Biological Assessment on the American Crocodile (*Crocodylus acutus*) for Turkey Point Nuclear Generating Unit Nos. 3 and 4 Proposed License Amendment to Increase the Ultimate Heat Sink Temperature Limit. Dated July 25, 2014.	ML14206A806
Other Referenced Documents	
U.S. Nuclear Regulatory Commission. Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Turkey Point Units 3 and 4—Final Report (NUREG–1437, Supplement 5). Dated January 28, 2002.	ML020280236
Florida Power & Light Company. Proposed Turkey Point Units 6 & 7, Project No. 763, Application for Combined License for Turkey Point Units 6 and 7. Dated June 30, 2009.	ML091830589

DOCUMENT	ADAMS ACCESSION NO.
U.S. Nuclear Regulatory Commission. Final Environmental Assessment and Finding of No Significant Impact Related to a License Amendment To Increase the Maximum Reactor Power Level, Florida Power & Light Company; Turkey Point, Units 3 and 4. Dated March 27, 2012.	ML12074A251
Florida Power & Light Company. Turkey Point Units 6 & 7 Combine License Application, Part 3: Environmental Report, Revision 5. Dated December 23, 2013.	ML13357A435
Florida Power & Light Company. Turkey Point Units 3 and 4; Wastewater Permit FL0001563; Request for Approval for the Use of Copper Sulfate, Hydrogen Peroxide, and a Bio-Stimulant in the Treatment and Control of Blue Green Algae in the Cooling Canal System. Dated June 18, 2014.	ML14206A806 (see Appendix A)
Florida Department of Environmental Protection. Re: Florida Power & Light, Turkey Point, NPDES Permit FL0001562, 90-Day Trial Approval. Dated June 27, 2014.	ML14206A806 (see Appendix A)
Florida Fish and Wildlife Conservation Commission. Re: Florida Power & Light, Turkey Point Plant Maintenance Activity, NPDES Permit FL0001562, Miami-Dade County. Dated July 1, 2014.	ML14206A806 (see Appendix A)

Dated at Rockville, Maryland, this 28th day of July 2014.

FOR THE NUCLEAR REGULATORY COMMISSION

Lisa M. Regner, Acting Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

July 28, 2014

Mr. Mano Nazar
President and Chief Nuclear Officer
Nuclear Division
NextEra Energy
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4 – ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT RELATED TO THE ULTIMATE HEAT SINK TEMPERATURE LIMIT (TAC NOS. MF4392 AND MF4393)

Dear Mr. Nazar:

The U.S. Nuclear Regulatory Commission has forwarded the enclosed Notice of Issuance of an Environmental Assessment and Finding of No Significant Impact to the Office of the Federal Register for publication. The notice relates to your application dated July 10, 2014, as supplemented by letter dated July 17, 2014, two letters dated July 22, 2014, and letter dated July 24, 2014 (Agencywide Documents Access and Management System Accession Nos. ML14196A006, ML14202A392, ML14204A368, ML14204A367, and ML14206A853 respectively), in which you requested that the ultimate heat sink water temperature limit and associated surveillance requirements in the Turkey Point Technical Specifications be revised.

If you have any questions, please contact me at (301) 415-0489.

Sincerely,

/RA/

Audrey L. Klett, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251
Enclosure:
Notice of Environmental Assessment and
Finding of No Significant Impact
cc w/encl: Distribution via Listserv

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ADAMS Accession Nos.: ML14209A031 **FRN ML14205A548** ***via e-mail**

OFFICE	NRR/DORL/LPLII-2/PM	NRR/DORL/LPLII-2/PM	NRR/DLR/RERB/BC*	OGC (NLO)*
NAME	AKlett	BClayton	DWrona (JRikhoff for)	BHarris
DATE	07/28/14	07/28/14	07/28/14	07/28/14
OFFICE	NRR/DORL/LPL2II-2/BC (A)	NRR/DORL/LPLII-2/PM		
NAME	LRegner	AKlett		
DATE	07/28/14	07/28/14		

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