



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

August 8, 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 - ISSUANCE OF AMENDMENTS UNDER EXIGENT CIRCUMSTANCES REGARDING ULTIMATE HEAT SINK AND COMPONENT COOLING WATER TECHNICAL SPECIFICATIONS (TAC NOS. MF4392 AND MF4393)

Dear Mr. Nazar:

The U.S. Nuclear Regulatory Commission (NRC or the Commission) has issued the enclosed Amendment No. 261 to Renewed Facility Operating License No. DPR-31 and Amendment No. 256 to Renewed Facility Operating License No. DPR-41 for the Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point), respectively. The amendments consist of changes to the Turkey Point Technical Specifications (TSs) in response to your application dated July 10, 2014, as supplemented by letters dated July 17, July 22 (two letters), July 24, July 26, July 28, July 29, and August 4, 2014.

The amendments revise the ultimate heat sink (UHS) water temperature limit, the UHS surveillance requirements (SRs), and a component cooling water (CCW) heat exchanger SR in the TSs. Specifically, the amendments increase the UHS limit from 100 to 104 degrees Fahrenheit in TS 3.7.4, "Ultimate Heat Sink," modify this TS's SR for monitoring the UHS temperature, and increase the frequency of a performance test to verify the CCW heat exchanger surveillance curves in TS SR 4.7.2. The amendments also include editorial changes to the TSs. The NRC staff's safety evaluation of the amendments is enclosed.

As part of its review of your request, the NRC staff consulted with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973, as amended. The NRC performed a biological assessment, which concluded that the NRC's issuance of the amendments may affect, but is not likely to adversely affect, the American crocodile and that the amendments would have no effect on the designated American crocodile critical habitat. The NRC submitted the biological assessment to the FWS for its review in a letter dated July 25, 2014. The FWS concurred with the NRC's determinations in a letter dated July 29, 2014. Pursuant to the National Environmental Policy Act of 1969, as amended, the NRC published an environmental assessment and finding of no significant impact in the *Federal Register* (FR) on July 31, 2014 (79 FR 44464). As discussed in the enclosed safety evaluation, the NRC determined that issuance of the amendments will not have a significant effect on the quality of the human environment.

M. Nazar

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The NRC has forwarded the enclosed Notice of Issuance of Amendments to Renewed Facility Operating Licenses and Opportunity for a Hearing to the Office of the Federal Register for publication.

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

Enclosures:

1. Amendment No. 261 to DPR-31
2. Amendment No. 256 to DPR-41
3. Safety Evaluation
4. Notice of Issuance

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

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-250

TURKEY POINT NUCLEAR GENERATING UNIT NO. 3

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 261
Renewed License No. DPR-31

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power & Light Company (the licensee) dated July 10, July 17, July 22 (two letters), July 24, July 26, July 28, July 29, and August 4, 2014, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

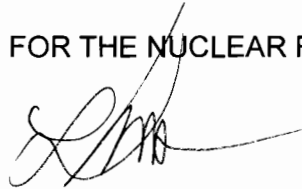
2. Accordingly, the license is amended by changes to the Operating License and Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Renewed Facility Operating License No. DPR-31 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 261 are hereby incorporated into this renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 14 days of issuance.

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

Attachment:
Changes to the Operating License
and Technical Specifications

Date of Issuance: August 8, 2014



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

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-251

TURKEY POINT NUCLEAR GENERATING UNIT NO. 4

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 256
Renewed License No. DPR-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power & Light Company (the licensee) dated July 10, July 17, July 22 (two letters), July 24, July 26, July 28, July 29, and August 4, 2014, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

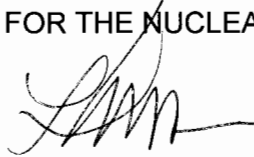
2. Accordingly, the license is amended by changes to the Operating License and Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Renewed Facility Operating License No. DPR-41 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 256 are hereby incorporated into this renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 14 days of issuance.

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

Attachment:
Changes to the Operating License
and Technical Specifications

Date of Issuance: August 8, 2014

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 261 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 256 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Replace Page 3 of Renewed Facility Operating License DPR-31 with the attached Page 3.

Replace Page 3 of Renewed Facility Operating License DPR-41 with the attached Page 3.

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove
3/4 7-15
3/4 7-17

Insert
3/4 7-15
3/4 7-17

- E. Pursuant to the Act and 10 CFR Parts 40 and 70 to receive, possess, and use at any time 100 milligrams each of any source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactively contaminated apparatus;
 - F. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of Turkey Point Units Nos. 3 and 4.
3. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified below:
- A. Maximum Power Level

The applicant is authorized to operate the facility at reactor core power levels not in excess of 2644 megawatts (thermal).
 - B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 261 are hereby incorporated into this renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
 - C. Final Safety Analysis Report

The licensee's Final Safety Analysis Report supplement submitted pursuant to 10 CFR 54.21(d), as revised on November 1, 2001, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than July 19, 2012.

The Final Safety Analysis Report supplement as revised on November 1, 2001, described above, shall be included in the next scheduled update to the Final Safety Analysis Report required by 10 CFR 50.71(e)(4), following the issuance of this renewed license. Until that update is complete, the licensee may make changes to the programs described in such supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

- E. Pursuant to the Act and 10 CFR Parts 40 and 70 to receive, possess, and use at any time 100 milligrams each of any source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactively contaminated apparatus;
 - F. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of Turkey Point Units Nos. 3 and 4.
3. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified below:
- A. Maximum Power Level

The applicant is authorized to operate the facility at reactor core power levels not in excess of 2644 megawatts (thermal).
 - B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 256 are hereby incorporated into this renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.
 - C. Final Safety Analysis Report

The licensee's Final Safety Analysis Report supplement submitted pursuant to 10 CFR 54.21(d), as revised on November 1, 2001, describes certain future inspection activities to be completed before the period of extended operation. The licensee shall complete these activities no later than April 10, 2013.

The Final Safety Analysis Report supplement as revised on November 1, 2001, described above, shall be included in the next scheduled update to the Final Safety Analysis Report required by 10 CFR 50.71(e)(4), following the issuance of this renewed license. Until that update is complete, the licensee may make changes to the programs described in such supplement without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.

SURVEILLANCE REQUIREMENTS (Continued)

- b.
 - 1) At least once per 31 days verify that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position.
 - 2) At least once per 14 days verify by a performance test the heat exchanger surveillance curves.*
- c. At least once per 18 months during shutdown, by verifying that:
 - 1) Each automatic valve servicing safety-related equipment actuates to its correct position on a SI test signal, and
 - 2) Each Component Cooling Water System pump starts automatically on a SI test signal.
 - 3) Interlocks required for CCW operability are OPERABLE.

*Technical specification 4.7.2.b.2 is not applicable for entry into MODE 4 or MODE 3, provided that:

- 1) Surveillance 4.7.2.b.2 is performed no later than 72 hours after reaching a Reactor Coolant System Tavg of 547°F, and
- 2) MODE 2 shall not be entered prior to satisfactory performance of this surveillance.

PLANT SYSTEMS

3/4.7.4 ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.4 The ultimate heat sink shall be OPERABLE with an average supply water temperature less than or equal to 104°F.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With the requirements of the above specification not satisfied, be in at least HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours. This ACTION shall be applicable to both units simultaneously.

SURVEILLANCE REQUIREMENTS

4.7.4 The ultimate heat sink shall be determined OPERABLE:

- a. At least once per 24 hours by verifying the average supply water temperature* is less than or equal to 104°F.
- b. At least once per hour by verifying the average supply water temperature* is less than or equal to 104°F, when water temperature exceeds 100°F.

*Portable monitors may be used to measure the temperature.



UNITED STATES
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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION FOR
AMENDMENT NO. 261 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-31 AND
AMENDMENT NO. 256 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-41
FLORIDA POWER & LIGHT COMPANY
TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 and 4
DOCKET NOS. 50-250 and 50-251

1.0 INTRODUCTION

By application dated July 10, 2014, as supplemented by letters dated July 17, July 22 (two letters), July 24, July 26, July 28, July 29, and August 4, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML14196A006, ML14202A392, ML14204A367, ML14204A368, ML14206A853, ML14210A374, ML14211A507, ML14211A508, and ML14217A341, respectively), Florida Power & Light Company (FPL, the licensee) requested changes to the Technical Specifications (TSs) for the Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point, or PTN, which is the licensee's acronym for the plants), which are contained in Appendix A of Renewed Facility Operating Licenses DPR-31 and DPR-41. The proposed changes would increase the ultimate heat sink (UHS) limit from 100 to 104 degrees Fahrenheit (°F) in TS 3.7.4, "Ultimate Heat Sink," modify this TS's Surveillance Requirements (SRs) for monitoring the UHS temperature, increase the frequency of the performance test to verify the component cooling water (CCW) heat exchanger surveillance curves in TS SR 4.7.2, and make editorial changes to the TSs.

By electronic mail (e-mail) dated July 18 (two e-mails), July 21, July 22, July 25, July 26, July 28, and August 3, 2014, (ADAMS Accession Nos. ML14203A614, ML14203A618, ML14203A620, ML14204A814, ML14208A010, ML14208A011, ML14216A072, and ML14217A004, respectively), the U.S. Nuclear Regulatory Commission (NRC, or the Commission) requested additional information from the licensee. By letters dated July 22 (two letters), July 24, July 26, July 28, July 29, and August 4, 2014, the licensee responded to these requests.

By letter dated July 17, 2014, the licensee requested that the NRC process the proposed amendments on an emergency basis in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.91(a)(5). Although the licensee requested that the NRC process the license amendment request under emergency circumstances, which allow the NRC to issue a license amendment involving no significant hazards consideration (NSHC) without

prior notice and opportunity for a hearing or for public comment, the NRC staff determined that there was sufficient time to publish a notice and request for public comment prior to issuance of the action. Therefore, the NRC staff processed the amendments as exigent pursuant to 10 CFR 50.91(a)(6).

The NRC staff's original proposed NSHC determination, which the NRC staff sent for publishing in the *Federal Register* (FR) and to the licensee on July 24, 2014 (ADAMS Accession No. ML14204A129), appeared in the FR on July 30, 2014 (79 FR 44214). The supplements dated July 24, July 26, and July 28, 2014, provided clarifying information that did not expand the scope of the submittal and did not change the NRC staff's proposed NSHC determination, as published in the FR. However, on July 29, 2014, the licensee supplemented its amendment request with a proposed change that increased the scope of the request and provided additional information related to the proposed NSHC published in the FR on July 30, 2014. Therefore, in accordance with 10 CFR 50.91(a)(6)(i)(B), the NRC issued a second notice (ADAMS Accession No. ML14211A266) in newspapers local to the Turkey Point site to announce the availability of the revised application and opportunity to comment. The licensee's supplement dated August 4, 2014, provided clarifying information that did not expand the scope of the submittal and did not change the NRC staff's proposed NSHC determination, as published in the local newspapers.

2.0 REGULATORY EVALUATION

2.1 Description of the Turkey Point Design

The heat generated by operation of Turkey Point is rejected to a closed cooling canal water system (i.e., the UHS). The cooling canal water system occupies an area approximately 2 miles wide by 5 miles long and includes 168 miles of earthen canals covering approximately 4370 acres of water surface. The average canal depth is 2.8 feet. The entire circulation route from the plant discharge back to plant intake is 13.2 miles and takes approximately 44 hours to complete.

The cooling canal system provides the coolant for the circulating water (CW) system and serves as the UHS for the safety-related intake cooling water (ICW) system. The CW system provides cooling water to the main plant condensers. The ICW system, which is similar to a service water system at other nuclear power plants, removes heat loads from the CCW system during normal and accident conditions to support both reactor and containment heat removal requirements, and spent fuel cooling requirements. The ICW system has three 100-percent capacity pumps. During normal operation, the ICW system provides cooling water to three 50 percent capacity CCW heat exchangers and two non-safety related turbine plant cooling water (TPCW) heat exchangers.

The Turkey Point units are pressurized-water reactors (PWRs) with large dry containments. The containment encloses the reactor coolant system (RCS) and is the final barrier against the release of significant amounts of radioactive fission products in the event of an accident. The containment structure must be capable of withstanding, without loss of function, the pressure and temperature conditions resulting from postulated loss-of-coolant accidents (LOCAs) and secondary line breaks. The containment structure must continue to serve as a low leakage barrier against the release of fission products for as long as the postulated accident requires.

The containment design pressure for the Turkey Point nuclear units is 55 pounds per square inch gauge (psig) and the design temperature is 283 °F. The most recent containment analyses performed by FPL and reviewed by the NRC staff for the extended power uprate (EPU) application indicates that the maximum containment pressure and temperatures are 53.9 psig and 279.2 °F, as documented in the licensee's letter dated July 22, 2011 (ADAMS Accession No. ML11207A456).

The emergency containment cooling (ECC) and containment spray (CS) systems accomplish the post-accident containment heat removal. The ECC system consists of three containment fan cooling units. The ECC system uses the CCW system as a heat sink, which is available upon ECC fan cooler actuation. The CS system consists of two redundant pumps and two spray headers. During the injection phase of an accident, the CS pumps take suction from the refueling water storage tank. During the recirculation phase of the accident, the CS pumps, if needed, would take suction from the residual heat removal (RHR) pumps. Following the transfer to long-term containment sump recirculation, the CS system heat load transfers to the CCW system through the RHR heat exchangers. The CCW system transfers heat to the ICW system through the CCW heat exchangers.

In the event of an accident, the non-safety related TPCW heat exchangers are automatically isolated so that additional ICW flow is diverted to the safety-related CCW heat exchangers. The CCW system is an intermediate cooling system serving normal and emergency equipment loads. During a design-basis accident (DBA), one ICW pump will provide all the cooling water required to two CCW heat exchangers for heat removal. The CCW system serves both normal and emergency equipment loads. The emergency loads served by the CCW system include the RHR system and RHR pump mechanical seals, ECC system, CS pump mechanical seals, and the high head safety injection pump bearing lubricating oil housing and mechanical seals.

2.2 Description of the Proposed Changes

In its letters dated July 10, and July 17, 2014, the licensee stated that UHS temperatures approached the TS 3/4.7.4 limit of 100 °F. The licensee stated that engineering and environmental analyses determined that the cooling water heat transfer capability was diminished because of the presence of higher-than-normal algae content. The licensee also stated that the UHS temperature has been recently trending higher than historical averages in part because of unseasonably dry weather. The licensee provided information that demonstrated that actual heat exchanger performance capability supports system operation with postulated canal temperatures greater than 100 °F and stated that if UHS temperatures exceed the current TS 3/4.7.4 limit of 100 °F, a plant shutdown would have to be initiated, which would impact grid reliability and increase the possibility of a shutdown transient. Adoption of the proposed TS changes would allow continued plant operation with a measured UHS temperature of less than or equal to 104 °F, including instrument measurement uncertainty.

The licensee proposed the following changes to TS 3/4.7.4:

- Increasing the UHS average supply water temperature limit from 100 °F to 104 °F in the Limiting Condition for Operation (LCO),
- Replacing periods with commas in the list of applicable operating modes for the LCO,
- Replacing a capital letter "I" with a lower case "i" in the Action statement, and

- Replacing SR 4.7.4 with SR 4.7.4.a, which corresponds to the new proposed UHS limit in the LCO, and SR 4.7.4.b, which requires more frequent temperature verification when the UHS temperature exceeds 100 °F.

The licensee proposed the following changes to TS 3/4.7.2:

- Increasing the frequency of SR 4.7.2.b(2) from every 31 days to every 14 days
- Making corresponding formatting changes to the SR 4.7.2.b and its footnote.

Section 3 of this safety evaluation describes the proposed changes in more detail.

In its letter dated July 10, 2014, the licensee stated that the TS Bases for TS 3/4.7.2 are:

The limit on [UHS] temperature in conjunction with the [SRs] of [TS] 3/4.7.2 will ensure that sufficient cooling capacity is available either: (1) To provide normal cooldown of the facility, or (2) To mitigate the effects of accident conditions within acceptable limits.

FPL has the option of monitoring the UHS temperature by monitoring the temperature in the ICW System piping going to the inlet of the CCW Heat Exchangers. Monitoring the UHS temperature after the ICW but prior to CCW Heat Exchangers is considered to be equivalent to temperature monitoring before the ICW Pumps. The supply water leaving the ICW Pumps will be mixed and[,] therefore, it will be representative of the bulk UHS temperature to the CCW Heat Exchanger inlet. The effects of the pump heating on the supply water are negligible due to low ICW head and high water volume. Accordingly, monitoring the UHS temperature after the ICW Pumps but prior to the CCW Heat Exchangers provides an equivalent location for monitoring the UHS temperature.

With the implementation of the CCW Heat Exchanger Performance Monitoring Program, the limiting UHS temperature can be treated as a variable with an absolute upper limit of 100 °F without compromising any margin of safety. Demonstration of actual heat exchanger performance capability supports system operation with postulated canal temperatures greater than 100 °F. Therefore, an upper [TS] limit of 100 °F is conservative.

In its letter dated July 29, 2014, the licensee stated that the TS Bases for TS 3/4.7.2 are:

The OPERABILITY of the [CCW] System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single active failure, is consistent with the assumptions used in the safety analyses. One pump and two heat exchangers provide the heat removal capability for accidents that have been analyzed.

2.3 Regulatory Review

The NRC staff reviewed the licensee's application to ensure that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) activities proposed will be conducted in compliance with the Commission's regulations and (3) the issuance of the amendments will not be inimical to the common defense and security or the health and safety of the public. The NRC staff considered the following regulatory requirements, guidance, and licensing and design basis information during its review of the proposed change.

The regulations in 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," provide the regulatory requirements for the licensing of production and utilization facilities.

Section 50.92, "Issuance of amendment," of 10 CFR, paragraph 50.92(a) states that in determining whether an amendment to a license will be issued to the applicant, the Commission will be guided by the considerations that govern the issuance of initial licenses to the extent applicable and appropriate.

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include TSs as part of the application for a license. These TSs are derived from the plants' safety analyses. The regulatory requirements related to the content of the TSs are contained in 10 CFR 50.36, "Technical Specifications." Section 50.36 of 10 CFR requires TSs to include the following categories related to station operation: (1) safety limits, limiting safety systems settings and control settings; (2) LCOs; (3) SRs; (4) design features; (5) administrative controls; (6) decommissioning; (7) initial notification; and (8) written reports.

Section 50.36(a)(1) of 10 CFR requires each applicant for a license to include a summary statement of the bases or reasons for proposed TSs, however the bases shall not become part of the TSs.

Section 50.36(c)(2) of 10 CFR states that LCOs are the lowest functional capability or performance level of equipment required for safe operation of the facility, and when LCOs are not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TSs until the LCO can be met.

Section 50.36(c)(3) of 10 CFR states that SRs are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met.

The TS 3/4.7.4 limit on UHS temperature in conjunction with the SRs in TS 3/4.7.2 ensure that sufficient cooling capacity is available to provide normal cool down of the facility, or to mitigate the effects of accident conditions within acceptable limits. The NRC staff reviewed the proposed TS 3/4.7.4 and SR 4.7.2.b.2 changes for compliance with 10 CFR 50.36.

In determining the acceptability of the proposed changes to TSs 3/4.7.4 and 3/4.7.2, the NRC staff also used plant-specific licensing basis information as well as the accumulation of generically approved guidance in Revision 4 to NUREG-1431, "Standard Technical

Specifications, Westinghouse Plants,” Volumes 1 and 2, dated April 2012 (ADAMS Accession Nos. ML12100A222 and ML12100A228).

Appendix A, “General Design Criteria [GDC] for Nuclear Power Plants,” to 10 CFR Part 50 establishes the minimum requirements for the principal design criteria for water-cooled nuclear power plants. The principal design criteria establish the necessary design, fabrication, construction, testing, and performance requirements for structures, systems, and components (SSCs) important to safety. The GDC used during the licensing of Turkey Point, which were based on the 1967 Atomic Energy Commission Proposed GDC, predate those provided in Appendix A of 10 CFR Part 50. The Turkey Point Updated Final Safety Analysis Report (UFSAR) describes the GDC applicable to Turkey Point. The Turkey Point UFSAR, Section 1.3, “General Design Criteria,” states the following:

The [GDC] define or describe safety objectives and approaches incorporated in the design. These [GDC] are addressed explicitly in the pertinent sections in this report. The remainder of this section, 1.3, presents a brief description of related features which are provided to meet the design objectives reflected in the criteria. The description is developed more fully in those succeeding sections of the report indicated by the references.

The parenthetical numbers following the section headings indicate the numbers of the 1967 proposed draft [GDC].

In addition, Attachment 4 to the licensee’s letter dated December 13, 2010 (ADAMS Accession No. ML103560177), contained a comparison of the Turkey Point UFSAR GDC to the GDC in 10 CFR Part 50, Appendix A. The Turkey Point UFSAR GDC are denoted as “PTN GDC.” The NRC staff based its acceptance criteria for the proposed changes on the following PTN GDC and UFSAR sections. The NRC staff also compared the PTN GDC to the 10 CFR Part 50, Appendix A GDC, as follows.

- PTN GDC-40 in Section 6.1.1 of the Turkey Point UFSAR states, “Adequate protection for those engineered safety features [ESFs], the failure of which could cause an undue risk to the health and safety of the public, shall be provided against dynamic effects and missiles that might result from plant equipment failures.”

PTN GDC-42 in Section 6.1.1 of the Turkey Point UFSAR states, “[ESFs] shall be designed so that the capability of these features to perform their required function is not impaired by the effects of a [LOCA] to the extent of causing undue risk to the health and safety of the public.”

The regulations in 10 CFR Part 50, Appendix A, GDC-4, “Environmental and dynamic effects design bases,” state that SSCs important to safety shall be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including [LOCAs]. These SSCs shall be appropriately protected against dynamic effects, including the effects of missiles, pipe whipping, and discharging fluids, that may result from equipment failures and from events and conditions outside the nuclear power unit.

- PTN GDC-10 in Section 5.1.1.1 of the Turkey Point UFSAR states, "Reactor containment shall be provided. The containment structure shall be designed (a) to sustain without undue risk to the health and safety of the public the initial effects of gross equipment failures, such as a large reactor coolant pipe break, without loss of required integrity and (b) together with other [ESFs] as may be necessary, to retain for as long as the situation requires the function capability of the containment to the extent necessary to avoid undue risk to the health and safety of the public."

The regulations in 10 CFR Part 50, Appendix A, GDC-16, "Containment design," state that reactor containment and associated systems shall be provided to establish an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment and to assure that the containment design conditions important to safety are not exceeded for as long as the postulated accident conditions require.

- PTN GDC-41 in Section 6.1.1 of the Turkey Point UFSAR states, "[ESFs], such as the emergency core cooling system and the containment heat removal system, shall provide sufficient performance capability to accommodate the failure of any single active component without resulting in undue risk to the health and safety of the public."

PTN GDC-52 in Section 6.3.1 of the Turkey Point UFSAR states, "Where an active heat removal system is needed under accident conditions to prevent exceeding containment design pressure, this system shall perform its required function, assuming failure of any single active component."

The regulations in 10 CFR Part 50, Appendix A, GDC-38, "Containment heat removal," state that a system to remove heat from the reactor containment shall be provided and that the system safety function shall be to reduce rapidly, consistent with the functioning of other associated systems, the containment pressure and temperature following any LOCA and maintain them at acceptably low levels.

- Section 9.3.2 of the Turkey Point UFSAR describes the system design and operation of the component cooling loop. The UFSAR states that the design basis of the CCW system is to provide sufficient heat removal from the ESFs to the UHS (ICW system), post-accident. These ESFs include the RHR heat exchangers and pumps, safety injection pumps, CS pumps, emergency containment coolers, and the support systems for this equipment.

The regulations in 10 CFR Part 50, Appendix A, GDC 44, "Cooling water," state that a system to transfer heat from SSCs important to safety, to a UHS shall be provided. The system safety function shall be to transfer the combined heat load of these SSCs under normal operating and accident conditions.

Attachment 4 to the licensee's letter dated December 13, 2010 (ADAMS Accession No. ML103560177), states:

There is no specific PTN GDC analogous to GDC-44 on Cooling Water that requires a system with the capability to transfer heat loads from safety-related SSCs to a heat sink under normal operating and accident

conditions; however, the requirements are addressed in the plant design. The CCW System is the heat sink for the RHR System, Chemical and Volume Control System (CVCS), Spent Fuel Pit Cooling and Purification System and various [RCS] components. The [ICW] System provides cooling water to the safety-related CCW Heat Exchangers and to the non-safety-related [TPCW] Heat Exchangers. The Auxiliary Feedwater (AFW) System supplies cooling water to the steam generators at times when the normal feed water systems are not available. These cooling water systems transfer heat from safety-related SSCs to either the [UHS] (canals) in the cases of CCW and ICW or to the atmosphere in the case of AFW.

- PTN GDC-49 in Section 5.1.1.1 of the Turkey Point UFSAR states, "The reactor containment structure, including access openings and penetrations and any necessary containment heat removal systems shall be designed so that any leakage of radioactive materials from the containment structure under conditions of pressure and temperature resulting from the largest credible energy release following a [LOCA], including the calculated energy from metal-water or other chemical reactions that could occur as a consequence of failure of any single active component in the emergency core cooling system, will not result in undue risk to the health and safety of the public."

The regulations in 10 CFR Part 50, Appendix A, GDC-50, "Containment design basis," state that the containment structure and its associated heat removal system shall be designed so that the containment structure and its internal compartments can accommodate, without exceeding the design leakage rate and with sufficient margin, the calculated pressure and temperature conditions resulting from any LOCA.

The NRC staff reviewed the licensee's application using the following sections of NUREG-0800, "Standard Review Plan [SRP] for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light Water Reactor] Edition."

- Section 6.2.1.1.A, "PWR Dry Containments, Including Subatmospheric Containments," Revision 3, dated March 2007 (ADAMS Accession No. ML063600402), provides guidance for evaluating containment integrity analyses for large dry containments.
- Section 6.2.1.3, "Mass and Energy [M&E] Release Analysis for Postulated Loss-of-Coolant Accidents (LOCAs)," Revision 3, dated March 2007 (ADAMS Accession No. ML053560191), provides guidance for evaluating M&E analyses.
- Section 6.2.2, "Containment Heat Removal Systems," Revision 5, dated March 2007 (ADAMS Accession No. ML070160661), provides guidance for evaluating containment heat removal systems.
- Section 9.2.5, "Ultimate Heat Sink," Revision 3, dated March 2007 (ADAMS Accession No. ML070550048), provides guidance for evaluating UHSs.

Regulatory Guide (RG) 1.27, "Ultimate Heat Sink for Nuclear Power Plants," Revision 2, dated January 1976 (ADAMS Accession No. ML003739969), describes an acceptable basis to the NRC staff that may be used to implement GDC 44. The RG states that a UHS serving multiple units should be capable of providing sufficient cooling water to permit simultaneous safe shutdown and cool down of all units it serves and to maintain them in a safe shutdown condition. The RG also states that in the event of an accident in one unit, the UHS should be able to dissipate the heat for that accident safely, to permit the concurrent safe shutdown and cool down of the remaining unit, and to maintain all units in a safe shutdown condition.

3.0 TECHNICAL EVALUATION

The NRC staff reviewed the licensee's proposed changes against the regulations, design basis information, and guidance provided in Section 2 of this safety evaluation. The NRC staff reviewed DBA analyses that use ICW temperature as a design input to ensure that the analyses' conclusions remain acceptable with an increase in the UHS TS temperature limit. The NRC staff also evaluated the impact of the proposed UHS temperature limit on safety-related equipment supported by the ICW system. The NRC staff also reviewed the impact of the proposed UHS TS temperature limit on safe shutdown operations and anticipated operational occurrences.

The NRC staff reviewed the acceptability of the licensee's proposed changes to LCOs by evaluating whether, among other things, the changes, including the associated remedial actions, provide reasonable assurance of public health and safety. The NRC staff also verified that the proposed changes to SRs assured that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met.

3.1 CCW System

The ICW system directly supports the CCW system. The licensee's basis for raising the UHS temperature limit was to show that the new limit would not adversely affect the safety performance of the CCW system. The CCW system's performance is determined by ensuring that the CCW supply temperature profile to safety-related components during a DBA meets all design basis acceptance criteria for mitigating the DBAs. Section 9.3.2 of the Turkey Point UFSAR states that the current design basis CCW temperature profile has a peak CCW temperature of 158.6 °F with a peak CCW heat load of 124.4 mega-British thermal units per hour (MBTU/hr) for two CCW heat exchangers.

The canal cooling water system at Turkey Point can affect the CCW heat exchangers' effectiveness over time (e.g., algae and minerals in the canals can build up and foul the heat exchangers) if the licensee does not frequently clean the heat exchangers. The licensee's CCW heat exchanger performance monitoring program keeps the CCW heat exchangers ready to perform their intended function and at their credited analysis capacity during normal and accident conditions. The CCW heat exchanger performance monitoring consists of TS SR testing and heat exchanger cleaning, and is supported by a computer program called "HX3/HX4."

In its letter dated July 10, 2014, the licensee stated that HX3/HX4 determines the performance of the CCW heat exchangers based on the conservation of energy equations between ICW and CCW systems and based on the performance equation for the heat exchanger. The HX3/HX4 program is an equilibrium heat transfer program that computes the maximum allowed heat exchanger tube resistance (TR) with inputs from ICW flow rate, CCW and ICW temperature differentials across the heat exchanger, and the heat exchanger performance equation. The program computes the heat gain to the ICW and equates that to the heat loss of the CCW system in which both are equal to the heat transferred within the heat exchanger as determined by the total surface area, the heat transfer coefficient of the heat exchanger, and the logarithmic mean temperature difference.

The program allows for fouling, which is also termed as TR, above the fouling factor used in the DBA safety analyses during times when the actual UHS temperature is lower than the maximum allowed temperature specified in the DBA safety analyses. The HX3/HX4 program computes the overall heat transfer coefficient with the corresponding TR and determines the maximum allowed ICW temperature for those conditions. Provided the maximum allowed ICW temperature is not exceeded for the current TR, the CCW heat exchangers will support the heat transfer required by the DBA safety analyses. In accordance with TS SR 4.7.2.b.2, the licensee collects data at a frequency of every 31 days on the CCW heat exchangers and enters the data in to the HX3/HX4 computer program, which determines the current CCW heat exchanger TR at those conditions and the corresponding maximum allowable UHS temperature. If the maximum allowable UHS temperature is maintained for the current TR, the CCW heat exchangers will support the heat transfer required by the DBA safety analyses.

In its letter dated July 10, 2014, the licensee provided Figure 3.5.1, "Tube Resistance Limit," which depicted the relationship between the CCW heat exchanger TR and the ICW temperature calculated by the HX3/HX4 program. In its letter dated July 24, 2014, the licensee revised Figure 3.5.1. Figure 3.5.1 shows a sloping program line with ICW temperature on the X-axis and TR on the Y-axis. In its letter dated July 10, 2014, the licensee stated that the design basis cases are embedded in the program and that verification cases were created to verify that the CCW heat exchangers, as a minimum, will remove the necessary heat for the accident and cool down scenarios at a given ICW temperature. Any point on the program line represents the maximum TR that would satisfy all the operational scenarios at or below the corresponding ICW temperature. The licensee also stated that for additional conservatism, its administrative limit would be 3 °F below the program line as shown in the figure.

In its letter dated July 24, 2014, the licensee stated that the current DBA analyses for containment integrity during a main steam line break (MSLB), double-ended hot leg (DEHL) break LOCA, or double-ended pump suction (DEPS) break LOCA use 100 °F as the ICW design input temperature and 0.003 hr - square foot - °F per BTU ($\text{hr}\cdot\text{ft}^2\cdot\text{°F}/\text{BTU}$) as the CCW heat exchanger TR. The DBA analyses for the CCW supply temperature profile output to containment show that the maximum CCW peak temperature to containment would be 158.6 °F. In its letter dated July 26, 2014, the licensee stated that the peak heat removal rate for the CCW heat exchangers is 62.2 MBTU/hr per heat exchanger – 2 heat exchangers are required – for the DBA analyses. Using HX3/HX4 with a peak CCW heat load and a 100 °F ICW temperature, the licensee computed a more conservative TR than that used in the DBA analyses. This computation demonstrates the conservatism of the HX3/HX4 output. Using HX3/HX4, the licensee computed a new TR with the ICW temperature at 104 °F with peak CCW heat load.

The licensee proposed the revised ICW temperature limit of 104 °F by maintaining the computed TR with a 3 °F safety margin or administrative limit as shown in Figure 3.5-1.

The NRC staff determined that an evaluation of the containment analysis using the Generation of Thermal-Hydraulic Information for Containments (GOTHIC) methodology with the ICW temperature at 104 °F was necessary to verify the HX3/HX4 results. Therefore, in its e-mail dated July 22, 2014, the NRC staff asked the licensee to use the current GOTHIC model to show the CCW supply water temperature profiles to the ECC and RHR heat exchangers for the limiting DEPS break LOCA and MSLB with the proposed ICW temperature of 104 °F. In its letter dated July 24, 2014, the licensee showed that the CCW temperature profile using an ICW temperature of 104 °F was essentially the same profile as using an ICW temperature of 100 °F. The licensee obtained the same temperature profile by reducing the allowed TR from 0.003 to 0.002714 hr-ft²-°F/BTU. The TR value used in the GOTHIC model with the ICW at 104 °F was greater than the HX3/HX4-allowed TR at an ICW temperature of 104 °F, which demonstrates the conservatism of the HX3/HX4 program line.

Because the licensee maintains CCW heat exchanger performance based on the limits in HX3/HX4, the CCW heat exchangers will be cleaner than what the licensee assumed in its safety analysis. The HX3/HX4 program limits are more conservative than those in the GOTHIC model. Thus, as long as the licensee maintains the cleanliness of the CCW heat exchangers in accordance with the HX3/HX4 program line presented in the revised Figure 3.5-1, the current design basis CCW peak temperature of 158.6 °F during a DBA will not be exceeded. By maintaining the TR within the HX3/HX4 program line and the conservative administrative limit of 3 °F below the program line documented in the licensee's letter dated July 24, 2014, the CCW supply temperature profile for a DBA will be maintained less than or equal to the current temperature profile, which has a peak value of 158.6°F. With the CCW supply temperature profile during a DBA remaining unchanged with an ICW temperature of 104 °F, the associated DBA analyses remain unaffected. In addition, because of the unchanged CCW supply temperature profile as a result of raising the ICW temperature limit to 104°F, the NRC concluded that the plants' responses to a station blackout condition and a TS-required cool down to cold shutdown conditions are unaffected, which the licensee stated in its letter dated July 10, 2014.

In addition to the ECC coolers and RHR heat exchangers, the CCW system also supports the RHR and CS pumps during a DBA. In its e-mail dated July 25, 2014, the NRC staff asked the licensee to provide the vendor-specified maximum allowed cooling water temperature to the RHR and CS pumps. In its letter dated July 26, 2014, the licensee stated, "Per the vendor data sheets for the mechanical seals on the Unit 4 CS pumps, 3 gpm [gallons per minute] of flow at 150 °F is needed for the CS pump seal coolers." The licensee also stated, "The RHR Pump mechanical seals are cooled by CCW through mechanical seal coolers with process fluid on the tube side and CCW water on the shell side. Per Drawing 5610-M-450-96, Sheet 1, CCW is to be available at 145 °F initially, decreasing to 125 °F in 16 hours." The NRC staff did not find this response to be satisfactory because the CCW supply temperature peaks at 158.6 °F and remains above 150 °F for several hours after a DBA. Therefore, in its e-mail dated July 28, 2014, the NRC staff asked the licensee to discuss how the RHR and CS pumps will have adequate cooling to run continuously in order to perform their design basis functions during a DBA.

In its letter dated July 28, 2014, the licensee responded that an "evaluation for the CS pumps was performed by the seal manufacturer (John Crane) with 300 °F seal cavity temperature and no seal cooling. The tests resulted in insignificant wear to the seals and demonstrated that the seals could perform their required post-accident safety function with 300 °F seal cavity temperature." For the RHR pumps, the licensee stated that the "OEM [original equipment manufacturer] vendor (Flowserve) provided [an] analysis that showed that with a cooling water temperature of 165 °F with a flow of 5.6 gpm, the RHR seal chamber will be at a temperature below its 24 hour operating limit." In its letter dated July 28, 2014, the licensee stated that the actual flow to the RHR seal coolers is 8.5 gpm, which is conservative compared to 5.6 gpm. The CCW system also provides cooling water to the high head safety injection pumps, which have an acceptable CCW supply temperature of 165 °F. The NRC staff noted that this value is greater than the CCW supply temperature of 158.6 °F after a DBA. Therefore, the NRC staff concludes that with an increase of ICW temperature to 104 °F, the CCW supply will adequately cool safety related pumps needed for DBAs.

The licensee is maintaining the CCW heat exchanger cleanliness in accordance with the HX3/HX4 program using an ICW actual temperature limit of 104 °F. The licensee performs the HX3/HX4 model evaluation of TR in accordance with TS SR 4.7.2. The licensee has proposed to change the frequency of TS SR 4.7.2.b.2 from at least once per 31 days to at least once per 14 days to assure that facility operation will be with safety limits by verifying CCW heat exchanger performance. The NRC staff finds that the increased surveillance testing assures the necessary quality of the heat exchanger is maintained, and thereby assures that operation of Turkey Point Units 3 and 4 under DBA conditions remains within previously analyzed conditions.

In its safety evaluation dated June 15, 2012 (ADAMS Accession No. ML11293A365), for the Turkey Point EPU amendments, the NRC staff documented its evaluation of the licensee's response to NRC Generic Letter 96-06, dated September 30, 1996 (ADAMS Accession No. ML031110021), which confirmed that the CCW head tank provided adequate static pressure within the time frame in which the CCW system is vulnerable to forming voids. During its review of the licensee's amendment request dated July 10, 2014, as supplemented, the NRC staff concluded that because the CCW supply temperature profile to the ECC coolers is not changing from that determined for the EPU, the licensee's requested changes have no impact on its response to Generic Letter 96-06.

NRC RG 1.27 states that in the event of an accident in one unit, the UHS should be able to dissipate the heat for that accident safely, to permit the concurrent safe shutdown and cool down of the remaining unit, and to maintain all units in a safe shutdown condition. Based on the aforementioned review, the NRC staff concludes that the CCW supply temperature to the non-accident unit is not significantly affected by the proposed increase to the ICW temperature limit. In addition, each unit has its own ICW and CCW systems. Therefore, the NRC staff concludes that adequate heat removal would be available to the non-accident unit under EPU conditions and the ICW temperature at 104 °F.

Section 9.2.5 of the SRP, "Ultimate Heat Sink," Revision 3, states that the UHS should be able to dissipate the maximum possible total heat load, including that of a LOCA, under the worst combination of adverse environmental conditions, even freezing, and can cool the unit (or units, including a LOCA for one unit of a multi-unit station with one heat sink) for a minimum

of 30 days without makeup. The NRC staff notes that the licensee will maintain the CCW supply temperature profile to safety-related cooling loads during a DBA by maintaining more strict CCW cleanliness requirements, which meets the regulatory guidance in Section 9.2.5 of the SRP.

The NRC staff concludes that operation with the proposed changes will continue to be in conformance with the UFSAR. Operation with the proposed changes will continue to conform with UFSAR Section 9.3.2 because the licensee showed that with the proposed changes, the CCW system will continue to be able to provide sufficient heat removal from the ESFs to the ICW system, post-accident. Based on the NRC staff's review of the licensee's amendment request and associated supplements, the NRC staff concludes that raising the ICW temperature limit in TS 3/4.7.4 to 104 °F while remaining in Modes 1, 2, 3, or 4, modifying SR 4.7.4 as previously discussed, and increasing the frequency of SR 4.7.2.b(2) are acceptable.

3.2 Containment

The licensee's containment response analysis of record (AOR) for containment pressure, temperature, and heat removal during EPU conditions is based on the GOTHIC methodology. The analysis is based on a single GOTHIC model that integrates the CCW heat exchanger with the containment. The AOR uses an ICW temperature of 100 °F as one of the inputs to the CCW heat exchanger.

In its letter dated July 10, 2014, the licensee stated that it performed a technical evaluation of the CCW system based on an ICW temperature of 104 °F and the proposed improvement in the CCW heat exchanger (i.e., with reduced fouling factor (or TR)) to determine if the ECC and CS systems' performance would be affected by the proposed change in the ICW temperature. The licensee's evaluation determined that adequate margin exists in the CCW system such that post-accident CCW system supply and return temperatures would remain as currently analyzed in the containment integrity analyses. The licensee's evaluation also determined that peak containment pressure and temperature are not altered by the proposed increase in the ICW temperature. The licensee's evaluation of DBA cases was based on the HX3/HX4 program line provided in Figure 3.5-1 and did not revise the AOR containment response for the proposed change.

In its letter dated July 24, 2014, the licensee stated that the HX3/HX4 program does not replace the GOTHIC methodology for MSLB or LOCA containment pressure and temperature response analysis. The licensee further stated that the GOTHIC containment model described in the UFSAR is a single integrated model that includes the component models for CCW pumps, CCW heat exchangers, and the RHR heat exchanger. The licensee also stated that no inputs, assumptions, or changes of any kind were required or had been made to the containment analysis as a result of the proposed increase to the allowable UHS temperature. The input values in the AOR are a 100 °F ICW temperature and a 0.0030 hr-ft²-°F/BTU CCW heat exchanger fouling factor, which is higher than the tube fouling factor allowed by the HX3/HX4 program line in the revised Figure 3.5-1.

In its letter dated July 24, 2014, the licensee responded to the NRC staff's request by performing sensitivity analyses based on the maximum CCW supply temperature and provided the worst CCW supply water temperature profiles to the ECC coolers and the RHR heat

exchangers for the limiting DEPS break LOCA and MSLB using the current GOTHIC model and the proposed ICW temperatures of 100 °F and 104 °F. The licensee performed the GOTHIC sensitivity cases using the same inputs for the ICW temperatures of 100 °F and 104 °F with the exception of the CCW heat exchanger TR. The licensee used a TR of 0.0030 hr-ft²-°F/BTU for ICW temperature of 100 °F, and a heat exchanger TR of 0.002714 hr-ft²-°F/BTU for ICW temperature of 104 °F. To provide assurance that the accident analysis is not affected, the licensee performed the sensitivity analyses by selecting the heat exchanger TR of 0.002714 hr-ft²-°F/BTU, which is a corresponding reduction from 0.0030 hr-ft²-°F/BTU but still higher than the HX3/HX4 program line in the revised Figure 3.5-1, to reflect the ICW temperature increase to 104 °F. The CCW temperature for the DEPS break LOCA and MSLB are provided in Figures, "SCVB RAI-1 Figure 2," and "SCVB RAI-1 Figure 3," respectively in the licensee's letter dated July 24, 2014. The NRC staff concluded that except for very minor differences, the CCW temperature profiles were very similar to the current analysis.

In its letter dated July 24, 2014, the licensee provided the sensitivity analysis results comparing peak containment pressure, peak containment temperature, peak sump temperature, and the CCW temperature for the peak CCW supply temperature case. Based on its review of the licensee's comparison, the NRC concluded that for the DEPS break LOCA case, the results were similar, except for the peak CCW supply water temperature, which changed from 158.6 °F for an ICW temperature of 100 °F to 158.5 °F for an ICW temperature of 104 °F. For the MSLB sensitivity analysis, peak containment pressure changed from 53.14 psig to 53.16 psig, peak containment temperature remained same, and peak CCW supply temperature increased from 152.7 °F to 153.1 °F. The small increases in the MSLB peak containment pressure and temperature and the CCW supply temperature have no impact on containment integrity. Peak sump water temperature was not provided for the MSLB because the results cover only the first 1000 seconds. The licensee did not provide the CCW temperature profile for the DEHL break LOCA, as requested by the NRC staff, because the DEHL break LOCA is not the limiting event for containment integrity and poses no challenge to CCW heat removal capability. Based on its review of the licensee's sensitivity analysis, the NRC staff concludes that the increase in the ICW temperature from 100 °F to 104 °F along with the corresponding decrease in CCW heat exchanger TR from 0.0030 hr-ft²-°F/BTU to 0.002714 hr-ft²-°F/BTU, respectively, will be expected to have a similar impact (i.e., an approximate increase of 0.02 pounds per square inch (psi)) on the currently licensed limiting DEPS break LOCA and MSLB peak containment pressures of 53.85 psig and 54.1 psig, respectively, given in UFSAR Table 14.3.4.3-10. In addition, the proposed amendment request did not affect the 10 CFR Part 50, Appendix J test pressure of 55 psig specified in TS 6.8.4h, which is the same as the containment design pressure.

In its e-mail dated July 22, 2014, the NRC requested the licensee to confirm that based on the proposed ICW temperature of 104 °F, the current containment analyses for peak pressure and temperature and heat removal are not affected. In its letter dated July 24, 2014, the licensee responded that the sensitivity analysis using an ICW temperature of 104 °F and a reduced fouling factor of 0.002714 hr-ft²-°F/BTU has an insignificant impact on the current peak containment pressure and containment temperature determined by the current analyses performed at the EPU conditions. Based on the information in the licensee's application as supplemented, the NRC staff concludes that there is reasonable assurance that the current containment analyses for containment peak pressure, temperature, and heat removal are not materially affected by the proposed request. The current analysis results will remain as part of

the licensing basis after the implementation of the proposed change. The staff also concludes that the proposed changes would not materially affect the peak containment recirculation pool temperature in the current analysis and, therefore, will have no adverse effects on the current emergency core cooling system pump net positive suction head analysis.

In its e-mail dated July 25, 2014, the NRC asked the licensee if it received information from Westinghouse regarding errors in M&E release calculations. In its letter dated July 26, 2014, the licensee responded that it has received such information from Westinghouse. The licensee stated, "Turkey Point specific sensitivity calculations performed by Westinghouse demonstrated that the impact on Turkey Point analyses is not significant and well within the impact presented in NSAL [Westinghouse Nuclear Safety Advisory Letter]-14-2." In its letter dated August 4, 2014, the licensee stated that the maximum increase in containment pressure caused by the error is 0.13 psi. The Turkey Point UFSAR, Section 5.1.1, states that the containment structure is licensed and designed to withstand a pressure of 55 psig. The Turkey Point UFSAR, Table 14.3.4.3-10, indicates that the maximum calculated accident pressure at EPU conditions is 53.85 psig for a DEPS break LOCA and 54.1 psig for an MSLB. An increase of 0.13 psi will reduce the margin between calculated accident and the design pressures, but the calculated accident pressure would continue to remain below the design pressure. The NRC staff concludes that the 0.13 psi increase in the maximum calculated accident pressure is acceptable.

In its e-mail dated July 28, 2014, the NRC staff requested the licensee to describe the changes that will be included in the UFSAR related to this amendment request. By letter dated July 28, 2014, the licensee responded by providing a draft change to the UFSAR. The licensee proposed to add a note to UFSAR Table 14.3.4.3-1 that clarifies that the containment integrity accident analysis performed at an ICW temperature of 100 °F is applicable up to the TS limit of 104 °F if performance monitoring of the CCW heat exchangers demonstrates the ability to remove postulated post-accident heat loads. The NRC staff concludes that the proposed note would clarify the UFSAR.

The NRC staff concludes that operation with the proposed changes will continue to be in conformance with the UFSAR. The NRC staff concludes that operation with the proposed changes will continue to be in conformance with PTN GDC 10 because the licensee showed that the reactor containment can: (1) sustain the initial effects of gross equipment failures, such as a large reactor coolant boundary break, without a loss of required integrity; and (2) together with the available ESFs, retain the functional capability for as long as the situation requires. The NRC staff concludes that operation with the proposed changes will continue to be in conformance with PTN GDC 40 and 42 because the licensee showed that the ESFs are protected against the dynamic effects that might result from plant equipment failures, as well as the effects of a LOCA. The NRC staff concludes that operation with the proposed changes will continue to be in conformance with PTN GDC 41 and 52 because the licensee showed that the containment heat removal system continues to prevent the exceeding of containment design pressure under accident conditions. The NRC staff concludes operation with the proposed changes will continue to be in conformance with PTN GDC 49 because the licensee showed that the containment design can accommodate, without exceeding the design leakage rate, the calculated pressure and temperature conditions resulting from the largest credible energy release following a LOCA.

3.3 ICW System

By e-mail dated July 21, 2014, the NRC staff requested the licensee to provide information regarding the impact of the UHS TS temperature limit increase on the ICW system pump seals, piping supports, spring cans, and pipe snubbers. In its letter dated July 26, 2014, the licensee confirmed that raising the UHS system to 104 °F from 100 °F will not have any adverse effects on ICW system piping, components, and piping supports nor net positive suction head available to the ICW pumps. The licensee stated that the packing material for the pump seals is rated for 600 °F, and the most limiting component in the packing box bearing is rated for 140 °F. The licensee stated that an administrative limit of 115 °F is maintained for the packing gland temperature. The licensee stated that the temperatures on the inlet and discharge on the ICW side of the CCW heat exchanger tubes rise from 100 °F and 116 °F to 104 °F and 122.2 °F, respectively, from that assessed as part of the EPU. The licensee stated that the analyses of the remaining ICW components remain bounded by the analyses done for the EPU and that the increase in low temperature piping does not present any significant pipe stress load. The NRC staff concluded that the increase in UHS TS temperature limit does not have any adverse effects on ICW system piping, components, and piping supports nor net positive suction head available to the ICW pumps.

By e-mail dated July 21, 2014, the NRC staff requested the licensee to provide additional justification relating to whether the increase in ICW temperature could lead to a turbine trip and a corresponding reactor trip. A turbine trip could occur on low condenser vacuum, which the ICW maintains. In its letter dated July 26, 2014, the licensee stated that the canal temperatures could affect the condenser by causing a decrease in condenser vacuum. However, the effects of an ICW temperature of 104 °F on the condenser vacuum will not directly cause a turbine trip because the licensee maintains the condenser cleanliness factor above that which could cause the condenser pressure to reach a trip set point for the turbine. The licensee stated that plant procedures provide guidance for controlling condenser vacuum. The licensee also stated that it has operating procedures for adjusting the TPCW flows to protect the generator from thermal transients and minimize TPCW related alarms. The licensee stated that the TPCW header temperature alarms at 110 °F but does not directly result in a reactor trip. The NRC staff concluded that the licensee takes adequate measures to monitor the impact of the ICW temperature on condenser vacuum and TPCW header temperatures thereby takes adequate measures to avert reactor trip.

3.4 Plant Cool Down Scenarios

In its letter dated July 10, 2014, the licensee described the effect of the proposed UHS temperature limit on the plants' capability to cool down to cold shutdown conditions within the required timeframe. The licensee stated that the limiting scenario involves a 10 CFR Part 50, Appendix R cool down during the summer season. The licensee stated that the cool down scenario can still be accomplished within the 72-hour required time period with increased UHS temperatures. The licensee also stated that the normal plant cool down to cold shutdown is still within the 36-hour time duration required by TSs.

Section 9.3.2 of the Turkey Point UFSAR describes the maximum calculated durations to cool down the RCS for Appendix R and normal cooldown scenarios. Based on its review as documented in Section 3.1 of this safety evaluation, the NRC staff determined that the time

requirements for reaching cold shutdown for the Appendix R and normal cooldown scenarios will not be affected by the proposed changes.

3.5 Changes to the TSs

In its letters dated July 10, and July 29, 2014, the licensee proposed changes to TSs 3/4.7.4 and 3/4.7.2 and provided the associated TS Bases for those changes.

The LCO statement (LCO 3.7.4) for TS 3/4.7.4 currently states, "The ultimate heat sink shall be OPERABLE with an average supply water temperature less than or equal to 100°F." The licensee proposed increasing the average supply water temperature in the LCO statement from 100 °F to 104 °F.

The APPLICABILITY statement for TS 3/4.7.4 currently states, "MODES 1, 2, 3, and 4." The licensee proposed correcting typographical errors by changing this to state, "MODES 1, 2, 3, and 4."

In the ACTION statement of TS 3/4.7.4, the licensee proposed to replace, "In" with "in" to correct a typographical error.

The TS SR 4.7.4 currently states, "4.7.4 The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average supply water temperature* to be within its limit." The licensee proposed to revise this SR as follows:

- 4.7.4 The ultimate heat sink shall be determined OPERABLE:
- a. At least once per 24 hours by verifying the average supply water temperature* is less than or equal to 104 °F.
 - b. At least once per hour by verifying the average supply water temperature* is less than or equal to 104 °F, when water temperature exceeds 100 °F.

The asterisk (*) in the SR refers to an existing footnote which states, "**Portable monitors may be used to measure the temperature." This footnote is part of the existing licensing basis and is being carried forward into the proposed change. The licensee described the addition of SR 4.7.4.b as an additional restriction on the verification of UHS water temperature. In its letter dated July 29, 2014, the licensee proposed placing language in the TS 3/4.7.4 Bases that would describe the reasons for SRs 4.7.4.a and 4.7.4.b, as well as state that an appropriate instrument uncertainty will be subtracted from the acceptance criteria to ensure the TS limit is not exceeded.

The TS SR 4.7.2.b currently states, "4.7.2 The Component Cooling Water System (CCW) shall be demonstrated OPERABLE: [...] b. at least once per 31 days by: [...] (2) verifying by a performance test the heat exchanger surveillance curves.**" The licensee proposed to modify the SR to state:

- 4.7.2 The Component Cooling Water System (CCW) shall be demonstrated OPERABLE:
[...]
- b. 1) At least once per 31 days verify that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position.
 - 2) At least once per 14 days verify by a performance test the heat exchanger surveillance curves.*

The licensee also proposed to make a corresponding formatting change in the SR 4.7.2 footnote that replaces "4.7.2.b(2)" with "4.7.2.b.2." The proposed TS SR 4.7.2.b.2 requires the licensee to demonstrate that the CCW system is OPERABLE by performing a CCW heat exchanger performance test. This test allows the licensee to quantify the effectiveness of the CCW heat exchangers. This provides assurance that the CCW heat exchangers will be able to provide sufficient cooling capacity during normal and accident conditions. The licensee proposed changing the frequency of SR 4.7.2.b.2 from at least once per 31 days to at least once per 14 days. The licensee described the increased frequency as an additional restriction for performance of the CCW heat exchanger performance test.

The NRC staff's review of the licensee's justification for the proposed change to LCO 3.7.4 is documented in sections 3.1, 3.2, 3.3, and 3.4 of this safety evaluation. The NRC staff views the change to the LCO statement taken alone as less restrictive overall because continued operation above the current temperature limit would be allowed with no remedial actions specified in the licensee. The NRC staff determined that the proposed LCO meets the requirements of 10 CFR 50.36(c)(2) because, for the reasons previously explained in this safety evaluation, the temperature will provide for the lowest functional capability or performance level of equipment required for safe operation of the facility. The addition of SR 4.7.4.b and the increased frequency of SR 4.7.2.b.2 assured that the LCO would be met.

The NRC staff determined that the proposed typographical changes to the APPLICABILITY and ACTION statements in TS 3/4.7.4 are editorial, do not materially change the requirements, and properly correct the TS. Therefore, the NRC staff determined they are acceptable.

The licensee submitted TS Bases changes corresponding to the proposed TS changes. The NRC staff determined that TS Bases changes provide the purpose for each requirement in the specification as required by 10 CFR 50.36(a)(1). Also, the Staff found the bases to be consistent with the Commission's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," dated July 2, 1993 (58 FR 39132).

4.0 EXIGENT CIRCUMSTANCES

In its letter dated July 10, 2014, the licensee requested the NRC to process the requested amendments by August 30, 2014. In its letter dated July 17, 2014, the licensee updated its application by asking the NRC to process the proposed amendments on an emergency basis. The licensee stated that the UHS temperature has been trending higher than historical averages in part because of reduced water levels caused by unseasonably dry weather and because of

reduced cooling efficiency caused by an algae bloom of concentrations higher than previously observed. The licensee requested a timely review of its application to avoid a dual unit shutdown that could affect grid reliability. Therefore, the licensee requested that the NRC process the license amendment request under emergency circumstances in accordance with 10 CFR 50.91(a)(5).

NRC staff determined that: (1) the licensee used its best efforts to make a timely application following identification of the issue; (2) the licensee could not reasonably have avoided the situation of lower-than-usual rainfall and a higher-than-usual algae concentration; and (3) the licensee has not abused the provisions of 10 CFR 50.91(a)(6). Depending on the weather, failure to issue these amendments in a timely way could result in derating or shutdown of the Turkey Point nuclear units, or in the prevention of an increase in power output up to the plants' licensed power level.

The NRC staff determined that although the licensee requested that the NRC process the license amendment request under emergency circumstances, there was sufficient time to process the amendments as exigent. As stated in 10 CFR 50.91(a)(6), where the Commission finds that exigent circumstances exist, in that a licensee and the Commission must act quickly and that time does not permit the Commission to publish a FR notice allowing 30 days for prior public comment, and it also determines that the amendment involves no significant hazards consideration, it will issue a Federal Register notice or use local media to provide reasonable notice to the public and opportunity to comment.

By letter dated July 24, 2014, the NRC informed the licensee that it had forwarded a Notice of Consideration of Issuance of Amendments to Renewed Facility Operating Licenses, Proposed NSHC Determination, and Opportunity for a Hearing to the Office of the Federal Register for publication. Pursuant to 10 CFR 50.91(a)(6)(i)(A), this notice was published in the FR on July 30, 2014 (79 FR 44214). However, on July 29, 2014, the licensee supplemented its amendment request with a proposed change that increased the scope of the request and provided additional information related to the proposed NSHC published in the FR on July 30, 2014. Given the continuing exigency, which related to weather, algae concentrations, and grid voltage conditions, the NRC staff invoked 10 CFR 50.91(a)(6)(i)(B) and used local media to issue a new notice (ADAMS Accession No. ML14211A266) with a shorter comment period. This new notice was published in newspapers local to the Turkey Point site to announce the availability of the revised application and opportunity to comment. This notice was published in the Miami Herald and the Key West Citizen newspapers on August 3, and August 4, 2014.

No comments were received.

5.0 NSHC DETERMINATION

The NRC's regulations in 10 CFR 50.92 state that the NRC may make a final determination that a license amendment involves NSHC if operation of the facility, in accordance with the amendment, would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a

margin of safety. In its letters dated July 10, and July 29, 2014, the licensee provided its analysis about the issue of NSHC. The licensee's analysis is as follows:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

The [UHS] is not an accident initiator. An increase in UHS temperature will not increase the probability of occurrence of an accident. The proposed change will allow plant operation with a UHS temperature less than or equal to 104 °F. Maintaining UHS temperature less than or equal to 104 °F ensures that accident mitigation equipment will continue to perform its required function, thereby ensuring the consequences of accidents previously evaluated are not increased. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Testing a CCW heat exchanger is not an accident initiator. An increase in the frequency of performing the CCW heat exchanger performance test will not increase the probability of occurrence of an accident. The proposed change will be an increase in the monitoring of CCW heat exchanger capability to remove heat during normal and accident conditions to support both reactor and containment heat removal requirements, and spent fuel cooling requirements. Maintaining CCW heat exchanger capability ensures that accident mitigation equipment will continue to perform its required function, thereby ensuring the consequences of accidents previously evaluated are not increased. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed change will not install any new or different equipment or modify equipment in the plant. The proposed change will not alter the operation or function of structures, systems or components. The response of the plant and the operators following a [DBA] is unaffected by this change. The proposed change does not introduce any new failure modes[,] and the design basis heat removal capability of the safety related components is maintained at the increased UHS temperature limit. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any previously evaluated.

The proposed change will not install any new or different equipment or modify equipment in the plant. The proposed change will not alter the operation or function of [SSCs]. The response of the plant and the operators following a [DBA] is unaffected by this change. The proposed change does not introduce any new failure modes[,] and the design basis heat removal capability of the safety related components is maintained and ensured by more frequently verifying CCW heat exchanger capability. Therefore, the proposed change will

not create the possibility of a new or different kind of accident from any previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

The increase in UHS temperature will not adversely affect [DBA] mitigation equipment performance. It was determined that adequate margin exists in the CCW system such that post-accident CCW system supply and return temperatures would remain as currently analyzed in the containment integrity analyses such that the peak containment pressure is not altered by the proposed TS change. The technical evaluation confirmed that adequate CCW design margin would remain under the proposed operating conditions to allow a reasonable degree of equipment degradation to occur while demonstrating that the affected safety related components could continuously perform their design function as currently analyzed. Therefore, the proposed change does not involve a significant reduction in the margin of safety.

An increase in the frequency of performing the CCW heat exchanger performance test does not affect [DBA] mitigation equipment performance. Increasing the frequency of performance of the existing test has no impact on the margin of safety associated with the CCW system or any system that it serves. The test confirms the capability of the CCW system to perform its safety function. Therefore, the proposed change does not involve a significant reduction in the margin of safety.

The NRC staff reviewed the licensee's analysis and concludes that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff has made a determination that NSHC is involved for the proposed amendments and that the amendments should be issued as allowed by the criteria contained in 10 CFR 50.91.

6.0 STATE CONSULTATION

In accordance with the Commission's regulations, the NRC staff notified the State of Florida official on July 28, 2014, and on August 6, 2014, of the proposed issuance of the amendments. The State of Florida official did not provide any comments.

7.0 ENVIRONMENTAL CONSIDERATION

As part of its review of the amendments, the NRC staff conducted consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973, as amended. The NRC performed a biological assessment, which concluded that the NRC's issuance of the amendments may affect, but is not likely to adversely affect, the American crocodile and that the amendments would have no effect on the designated American crocodile critical habitat. The NRC submitted the biological assessment to the FWS for its review in a letter dated July 25, 2014 (ADAMS Accession No. ML14206A800). The FWS concurred with the NRC's determinations in a letter dated July 29, 2014 (ADAMS Accession No. ML14210A170).

Pursuant to the National Environmental Policy Act of 1969, as amended, and 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact were published in the FR on July 31, 2014 (79 FR 44464). Accordingly, based on the environmental assessment, the Commission has determined that issuance of these amendments will not have a significant effect on the quality of the human environment.

8.0 CONCLUSION

Based on the aforementioned considerations, the NRC staff has concluded that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: August 8, 2014

ENCLOSURE 4

TURKEY POINT NUCLEAR GENERATING UNITS NOS. 3 AND 4

NOTICE OF ISSUANCE

NUCLEAR REGULATORY COMMISSION

[Docket Nos. 50-250 and 50-251; NRC-2014-0176]

Florida Power & Light Company;

Turkey Point Nuclear Generating Unit Nos. 3 And 4

AGENCY: Nuclear Regulatory Commission.

ACTION: License amendment; issuance, opportunity to request a hearing, and petition for leave to intervene.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) approved a request by Florida Power & Light Company (the licensee) for amendments to Renewed Facility Operating License Nos. DPR-31 and DPR-41, issued to the licensee for operation of Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point), located in Miami-Dade County, Florida. The amendments revise the ultimate heat sink (UHS) water temperature limit in the Turkey Point Technical Specifications (TSs) from 100 to 104 degrees Fahrenheit (°F) and revise surveillance requirements for monitoring the UHS temperature and component cooling water (CCW) heat exchangers. The amendments also made editorial changes to the TSs. The Staff finds that the application for the license amendments complies with the requirements of the Atomic Energy Act of 1954, as amended, and the NRC's regulations.

DATES: A requests for a hearing or petition for leave to intervene must be filed by **[INSERT DATE 60 DAYS FROM DATE OF PUBLICATION]**.

ADDRESSES: Please refer to Docket ID NRC-2014-0176 when contacting the NRC about the availability of information regarding this document. You may obtain 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-2014-0176. Address questions about NRC dockets to Carol Gallagher; telephone: 301-287-3422; e-mail: Carol.Gallagher@nrc.gov. For technical questions, contact the individual(s) 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 ADAMS 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. For the convenience of the reader, the ADAMS accession numbers for each document referenced in this document (if that document is available in ADAMS) are 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 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 issued amendments to Renewed Facility Operating License Nos. DPR-31 and DPR-41, issued to Florida Power & Light Company, for operation of the Turkey Point Nuclear Generating Unit Nos. 3 and 4, located in Miami-Dade County, Florida. The amendments revise the UHS water temperature limit in the Turkey Point TSs from 100 to 104 °F and revise surveillance requirements for monitoring the UHS temperature and CCW heat exchangers. The amendments also made editorial changes to the TSs. The Staff finds that the application for the license amendments complies with the requirements of the Atomic Energy Act of 1954, as amended, and the NRC's regulations. Copies of the Staff's evaluation may be obtained and examined at ADAMS Accession No. ML14199A107.

In its letters dated July 10, and July 17, 2014, the licensee stated that the UHS temperature has approached the current TS limit of 100 °F. The licensee stated that the UHS temperature has been trending higher than historical averages in part because of reduced water levels caused by unseasonably dry weather and because of reduced cooling efficiency caused by an algae bloom of concentrations higher than previously observed. The licensee requested a timely review of its application to avoid a dual unit shutdown that could affect grid reliability. Therefore, the licensee requested that the NRC process the license amendment requests under emergency circumstances in accordance with § 50.91(a)(5) of Title 10 of the *Code of Federal Regulations* (10 CFR). The Staff considered the circumstances (i.e. the dry weather, UHS temperature, algae concentration, and grid reliability) and found exigent circumstances exist, in that a licensee and the Commission must act quickly and that time does not permit the

Commission to publish a Federal Register notice allowing 30 days for prior public comment. The Staff also determined that the amendment involves no significant hazards considerations. Accordingly, pursuant to 10 CFR 50.91(a)(6)(i)(A), the Commission published a notice of an opportunity for hearing and notice for prior public comment on its proposed determination that no significant hazards consideration is involved; the notice was published in the *Federal Register* on July 30, 2014 (79 FR 44214).

The licensee's supplements dated July 22, July 24, July 26, and July 28, 2014, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on July 30, 2014. However, on July 29, 2014, the licensee supplemented its amendment request with a proposed change that did increase the scope of the request and affected the proposed no significant hazards consideration published in the *Federal Register* on July 30, 2014. Therefore, after considering the continued exigent circumstances related to the dry weather, UHS temperature, algae concentration, and grid reliability, and pursuant to 10 CFR 50.91(a)(6)(i)(B), the Staff used local media to provide reasonable notice to the public in the area surrounding the licensee's facility of the amendment request and the proposed determination that no significant hazards consideration is involved, and provided a shortened comment period. The licensee's supplement dated August 4, 2014, provided additional information that clarified the application, did not expand the scope of the application as noticed in the newspapers, and did not change the NRC staff's revised proposed no significant hazards consideration determination as published in the newspapers local to the Turkey Point site. No comments have been received.

Because of the unpredictable nature of the dry weather, the UHS temperature, algae concentration, and grid reliability, the NRC determined that the exigent circumstances remain.

Therefore, the NRC is issuing the amendments prior to the expiration of the superseded 14-day comment period published in the initial *Federal Register* notice (FRN) (79 FR 44214). No request for a hearing or petition for leave to intervene was filed based on the superseded FRN. To prevent any confusion about the time to request a hearing, which may have been caused by the original (superseded) FRN, the NRC is now resetting the period to request a hearing or petition for leave to intervene.

II. Opportunity to Request a Hearing and Petition for Leave to Intervene.

Within 60 days after the date of publication of this *Federal Register* notice, any person whose interest may be affected by this proceeding and who desires to participate as a party in the proceeding must file a written request for hearing or a petition for leave to intervene specifying the contentions which the person seeks to have litigated in the hearing with respect to the license amendment request. Requests for hearing and petitions for leave to intervene shall be filed in accordance with the NRC's "Agency Rules of Practice and Procedure" in 10 CFR part 2. Interested person(s) should consult a current copy of 10 CFR 2.309, which is available at the NRC's PDR. The NRC's regulations are accessible electronically from the NRC Library on the NRC's Web site at <http://www.nrc.gov/reading-rm/doc-collections/cfr/>.

As required by 10 CFR 2.309, a request for hearing or petition for leave to intervene must set forth with particularity the interest of the petitioner in the proceeding and how that interest may be affected by the results of the proceeding. A request for hearing or petition for leave to intervene must state: (1) the name, address, and telephone number of the requestor or petitioner; (2) the nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding; (3) the nature and extent of the requestor's/petitioner's property, financial, or

other interest in the proceeding; and (4) the possible effect of any decision or order which may be entered in the proceeding on the requestor's/petitioner's interest.

For each contention, the requestor/petitioner must provide a specific statement of the issue of law or fact to be raised or controverted, as well as a brief explanation of the basis for the contention. Additionally, the requestor/petitioner must demonstrate that the issue raised by each contention is within the scope of the proceeding and is material to the findings that the NRC must make to support the granting of a license amendment in response to the application. The hearing request or petition must also include a concise statement of the alleged facts or expert opinion that support the contention and on which the requestor/petitioner intends to rely at the hearing, together with references to those specific sources and documents. The hearing request or petition must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact, including references to specific portions of the application for amendment that the petitioner disputes and the supporting reasons for each dispute. If the requestor/petitioner believes that the application for amendment fails to contain information on a relevant matter as required by law, the requestor/petitioner must identify each failure and the supporting reasons for the requestor's/petitioner's belief. Each contention must be one which, if proven, would entitle the requestor/petitioner to relief. A requestor/petitioner who does not satisfy these requirements for at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing with respect to resolution of that person's admitted contentions, including the opportunity to present evidence and to submit a cross-examination plan for cross-examination of witnesses, consistent with NRC regulations, policies, and procedures. The

Atomic Safety and Licensing Board will set the time and place for any prehearing conferences and evidentiary hearings, and the appropriate notices will be provided.

Hearing requests or petitions for leave to intervene must be filed no later than 60 days from the date of publication of this notice. Requests for hearing, petitions for leave to intervene, and motions for leave to file new or amended contentions that are filed after the 60-day deadline will not be entertained absent a determination by the presiding officer that the filing demonstrates good cause by satisfying the three factors in 10 CFR 2.309(c)(1)(i)-(iii).

III. Electronic Submissions (E-Filing).

All documents filed in NRC adjudicatory proceedings, including a request for hearing, a petition for leave to intervene, any motion or other document filed in the proceeding prior to the submission of a request for hearing or petition to intervene, and documents filed by interested governmental entities participating under 10 CFR 2.315(c), must be filed in accordance with the NRC's E-Filing rule (72 FR 49139; August 28, 2007). The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on electronic storage media. Participants may not submit paper copies of their filings unless they seek an exemption in accordance with the procedures described below.

To comply with the procedural requirements of E-Filing, at least ten 10 days prior to the filing deadline, the participant should contact the Office of the Secretary by e-mail at hearing.docket@nrc.gov, or by telephone at 301-415-1677, to request (1) a digital identification (ID) certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any proceeding in which it is participating; and (2) advise the Secretary that the participant will be submitting a request or petition for hearing (even in instances in which the participant, or its counsel or representative, already holds an

NRC-issued digital ID certificate). Based upon this information, the Secretary will establish an electronic docket for the hearing in this proceeding if the Secretary has not already established an electronic docket.

Information about applying for a digital ID certificate is available on the NRC's public Web site at <http://www.nrc.gov/site-help/e-submittals/getting-started.html>. System requirements for accessing the E-Submittal server are detailed in the NRC's "Guidance for Electronic Submission," which is available on the agency's public Web site at <http://www.nrc.gov/site-help/e-submittals.html>. Participants may attempt to use other software not listed on the Web site, but should note that the NRC's E-Filing system does not support unlisted software, and the NRC Meta System Help Desk will not be able to offer assistance in using unlisted software.

If a participant is electronically submitting a document to the NRC in accordance with the E-Filing rule, the participant must file the document using the NRC's online, Web-based submission form. In order to serve documents through the Electronic Information Exchange System, users will be required to install a Web browser plug-in from the NRC's Web site. Further information on the Web-based submission form, including the installation of the Web browser plug-in, is available on the NRC's public Web site at <http://www.nrc.gov/site-help/e-submittals.html>.

Once a participant has obtained a digital ID certificate and a docket has been created, the participant can then submit a request for hearing or petition for leave to intervene. Submissions should be in Portable Document Format (PDF) in accordance with NRC guidance available on the NRC's public Web site at <http://www.nrc.gov/site-help/e-submittals.html>. A filing is considered complete at the time the documents are submitted through the NRC's E-Filing system. To be timely, an electronic filing must be submitted to the E-Filing system no

later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The E-Filing system also distributes an e-mail notice that provides access to the document to the NRC's Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the documents on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before a hearing request/petition to intervene is filed so that they can obtain access to the document via the E-Filing system.

A person filing electronically using the NRC's adjudicatory E-Filing system may seek assistance by contacting the NRC Meta System Help Desk through the "Contact Us" link located on the NRC's public Web site at <http://www.nrc.gov/site-help/e-submittals.html>, by e-mail to MSHD.Resource@nrc.gov, or by a toll-free call at 1-866-672-7640. The NRC Meta System Help Desk is available between 8 a.m. and 8 p.m., Eastern Time, Monday through Friday, excluding government holidays.

Participants who believe that they have a good cause for not submitting documents electronically must file an exemption request, in accordance with 10 CFR 2.302(g), with their initial paper filing requesting authorization to continue to submit documents in paper format. Such filings must be submitted by: (1) first class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland, 20852, Attention: Rulemaking and Adjudications Staff.

Participants filing a document in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service. A presiding officer, having granted an exemption request from using E-Filing, may require a participant or party to use E-Filing if the presiding officer subsequently determines that the reason for granting the exemption from use of E-Filing no longer exists.

Documents submitted in adjudicatory proceedings will appear in the NRC's electronic hearing docket which is available to the public at <http://ehd1.nrc.gov/ehd/>, unless excluded pursuant to an order of the Commission, or the presiding officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings, unless an NRC regulation or other law requires submission of such information. However, a request to intervene will require including information on local residence in order to demonstrate a proximity assertion of interest in the proceeding. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants are requested not to include copyrighted materials in their submission.

IV. Availability of Documents.

The following table identifies the documents cited in this document and related to the issuance of the amendments. 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.
U.S. Nuclear Regulatory Commission. Turkey Point Nuclear Plant, Units 3 and 4 – UHS Amendment. Dated August 8, 2014.	ML14199A107
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
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
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
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 26, 2014	ML14210A374

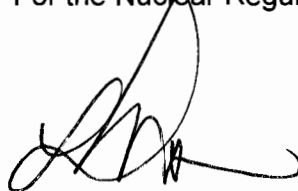
DOCUMENT	ADAMS ACCESSION NO.
<p>Florida Power & Light Company.</p> <p>Response to Request for Additional Information Regarding License Amendment Request No. 231, Application to Revise Technical Specifications to Revise Ultimate Heat Sink Temperature Limit.</p> <p>Dated July 28, 2014</p>	ML14211A507
<p>Florida Power & Light Company.</p> <p>License Amendment Request No. 231, Application to Revise Ultimate Heat Sink Temperature Limit - Supplement 2, and Response to Request for Additional Information (RAI-5 and BOP RAs 5 and 5.1)</p> <p>Dated July 29, 2014</p>	ML14211A508
<p>Florida Power & Light Company.</p> <p>Response to Containment and Ventilation Branch Request for Additional Information (RAI-5), Regarding License Amendment Request No. 231, Application to Revise Ultimate Heat Sink Temperature Limit</p> <p>Dated August 4, 2014</p>	ML14217A341
<p>U.S. Nuclear Regulatory Commission.</p> <p>Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393). [1 of 2]</p> <p>Dated July 18, 2014.</p>	ML14203A614
<p>U.S. Nuclear Regulatory Commission.</p> <p>Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393). [2 of 2]</p> <p>Dated July 18, 2014.</p>	ML14203A618
<p>U.S. Nuclear Regulatory Commission.</p> <p>Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393).</p> <p>Dated July 21, 2014.</p>	ML14203A620
<p>U.S. Nuclear Regulatory Commission.</p> <p>Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393).</p> <p>Dated July 22, 2014.</p>	ML14204A814

DOCUMENT	ADAMS ACCESSION NO.
<p>U.S. Nuclear Regulatory Commission. Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393). Dated July 25, 2014.</p>	<p>ML14208A010</p>
<p>U.S. Nuclear Regulatory Commission. Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393). Dated July 26, 2014.</p>	<p>ML14208A011</p>
<p>U.S. Nuclear Regulatory Commission. Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393). Dated July 28, 2014.</p>	<p>ML14216A072</p>
<p>U.S. Nuclear Regulatory Commission. Turkey Point 3 and 4 Request for Additional Information – LAR231 (TAC MF4392 and MF4393). Dated August 3, 2014.</p>	<p>ML14217A004</p>

<p>U.S. Nuclear Regulatory Commission.</p> <p>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).</p> <p>Dated July 24, 2014.</p>	<p>ML14204A129 (letter) ML14199A111 (enclosure)</p>
<p>U.S. Nuclear Regulatory Commission.</p> <p>Public Notice NRC Staff Proposes to Amend Renewed Facility Operating Licenses at the Turkey Point Nuclear Generating Unit Nos. 3 and 4</p> <p>Dated July 31, 2014.</p>	<p>ML14211A266</p>
<p>U.S. Nuclear Regulatory Commission.</p> <p>Turkey Point, Units 3 and 4, Environmental Assessment and Finding of No Significant Impact Related to the Ultimate Heat Sink Temperature Limit (TAC NOS. MF4392 and MF4393)</p> <p>Dated July 28, 2014.</p>	<p>ML14209A031 (letter) ML14205A548 (enclosure)</p>

Dated at Rockville, Maryland, this 8th day of August 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

M. Nazar

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The NRC has forwarded the enclosed Notice of Issuance of Amendments to Renewed Facility Operating Licenses and Opportunity for a Hearing to the Office of the Federal Register for publication.

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

Enclosures:

1. Amendment No. 261 to DPR-31
2. Amendment No. 256 to DPR-41
3. Safety Evaluation
4. Notice of Issuance

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***By email**

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