

**ENCLOSURE 1**

**CONTENTS OF THE TURKEY POINT NUCLEAR PLANT, UNITS 3 AND  
4 IMPROVED TECHNICAL SPECIFICATIONS (ITS) SUBMITTAL**

**(9 TOTAL PAGES, INCLUDING COVER SHEETS)**

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## **CONTENTS OF THE TURKEY POINT NUCLEAR GENERATING STATION IMPROVED TECHNICAL SPECIFICATIONS (ITS) SUBMITTAL**

### **Executive Summary**

The proposed changes from the Turkey Point Nuclear Generating Station (PTN) Unit 3 and Unit 4 current Technical Specifications (CTS) to the Improved Standard Technical Specifications (ISTS) are based on Revision 5.0 of NUREG 1431, "Standard Technical Specifications – Westinghouse Plants." There are no additional NRC approved generic changes (Technical Specification Task Force (TSTF) change travelers) since approval of NUREG-1431, Revision 5, to address in this license amendment request as of September 15, 2021. Additionally, there are no linked PTN Unit 3 or Unit 4 submittals associated with this ITS license amendment request. Technical Specification Task Force (TSTF)-GG-13-01, "Improved Technical Specifications Conversion Guidance," Revision 0, was used to prepare the content of the license amendment request (LAR).

The Battery Monitoring and Maintenance Program is included to provide for battery restoration and maintenance per the guidance of IEEE 450-2010, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications." The Notice of Availability for TSTF-500, Revision 2, "DC Electrical Rewrite - Update to TSTF-360," (76FR54510) references the model application and safety evaluation for plant-specific adoption of TSTF-500, Revision 2 (NRC ADAMS Accession No. ML111751792). Florida Power & Light Company (FPL) has verified the applicable information specified in Section 2.2 of the TSTF-500 model application, including applicable updated Final Safety Analysis Report (UFSAR) information. FPL has verified the following information in support of PTN adoption of TSTF-500, Revision 2:

- A letter has been obtained from the manufacturer of the batteries used at PTN Units 3 and 4 verifying the acceptability of using float current monitoring instead of specific gravity monitoring as a reliable and accurate indication of the state-of-charge of the battery and that this will hold true over the life of the battery.
- Measurement equipment used to monitor float current has the necessary accuracy and capability to measure electrical currents in the expected range.
- Spare battery chargers are available and appropriately sized to support each battery. Each 125 VDC battery charger is a full capacity charger. Typically, two battery chargers are operated in parallel to supply the battery and carry the DC loads. However, either connected battery charger can meet full DC bus load demand and recharge its associated battery. In addition, an additional full capacity swing battery charger can be connected to either DC bus.
- Maintaining battery connection resistances below the battery manufacturer

specifications keeps the battery bounded by the battery performance data that was used to qualify the cells. The connection resistance readings are maintained within 20% of the baseline resistance values determined during installation for optimum performance of the battery system. IEEE 450-2010 supports this methodology.

Proposed commitments associated with TSTF-500 are provided in Enclosure 5. A description of the proposed UFSAR changes associated with TSTF-500 are provided in Enclosure 6. Proposed commitments and UFSAR revision packages associated with TSTF-500 will be completed prior to implementation of the ITS Amendment.

Several risk informed initiatives incorporated into the Improved Standard Technical Specifications (ISTS) and associated Bases specified in NUREG-1431, Rev. 5.0, have been previously approved and incorporated into the PTN Unit 3 and Unit 4 Technical Specifications. Therefore, information related to the NRC reviewer notes provided in the ISTS and ISTS Bases associated with these risk-informed initiatives are provided in the license amendment request (LAR) submittals, FPL responses to NRC staff requests for additional information, and accompanying safety evaluations associated with these risk informed license amendments.

PTN Units 3 and 4 adopted a Surveillance Frequency Control Program (SFCP) on July 16, 2015, in License Amendments 263 and 258, for Unit 3 and Unit 4 respectively (NRC ADAMS Accession No. ML15166A320). In the NRC safety evaluation accompanying the SFCP amendments, the NRC concluded that the adoption of TSTF-425, Revision 3, and risk-informed methodology of NEI 04-10, "Risk-Informed Method for Control of Surveillance Frequencies," Revision 1, as referenced in the Administrative Controls section of the Technical Specifications, satisfies the key principles of risk-informed decisionmaking applied to the relocated Surveillance frequencies as delineated in Regulatory Guide 1.177, Revision 1, and Regulatory Guide 1.174, Revision 2. Changes to Surveillance frequencies listed in the SFCP are made in accordance with NEI 04-10, Revision 1, as specified in CTS Chapter 6 (ITS Chapter 5).

PTN Units 3 and 4 adopted TSTF -505, Revision 1, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b" to include Risk Informed Completion Times (RICTs) for selected Technical Specification systems. License Amendments 284 and 278, were issued on December 3, 2018, for Unit 3 and Unit 4 respectively, to incorporate the RICTs and an associated administrative program (NRC ADAMS Accession No. ML182703A429). In the NRC safety evaluation accompanying the RICT amendment, the NRC found that the PTN PRA maintenance and change process ensures that the configuration risk management program models used in the RICT calculations will continue to use PRA methods acceptable to the NRC and that the PRA model will be updated as necessary to reflect the as-built and as-operated plant. The NRC also found that appropriate programmatic and procedural controls for the RICT Program are consistent with the guidance of NEI 06-09, Revision 0-A. Controls to calculate Risk Informed Completion Times (RICTs) are provided in the CTS Chapter 6 (ITS Chapter 5) and implemented in accordance with NEI 06-09-A, Revision 0, "Risk- Managed Technical Specifications (RMTS) Guidelines." The LAR submittal, FPL responses to NRC staff requests for additional information, and safety evaluation accompanying the RICT amendment address the implementation of the RICT program to perform a

contemporaneous assessment of the overall impact on safety of proposed plant configurations prior to performing and during performance of maintenance activities that remove equipment from service as stated in several NRC reviewer note in the ISTS Bases.

Enclosure 2 of the submittal for the conversion of the PTN Units 3 and 4 CTS to the ISTS provides the proposed changes to the CTS, discussion of changes for the proposed CTS changes, the PTN Unit 3 and Unit 4 ITS and ITS Bases, as marked up utilizing NUREG-1431, and justification for deviations from the NUREG. Enclosure 2 consists of the following sixteen volumes:

### **Volume Titles**

1. Application of Selection Criteria to the Turkey Point Nuclear Generating Station Technical Specifications
2. Generic Determination of No Significant Hazards Considerations and Environmental Assessment
3. ITS Chapter 1.0, Use and Application
4. ITS Chapter 2.0, Safety Limits
5. ITS Section 3.0, Limiting Condition for Operation (LCO) Applicability and Surveillance Requirement (SR) Applicability
6. ITS Section 3.1, Reactivity Control Systems
7. ITS Section 3.2, Power Distribution Limits
8. ITS Section 3.3, Instrumentation
9. ITS Section 3.4, Reactor Coolant System
10. ITS Section 3.5, Emergency Core Cooling Systems (ECCS)
11. ITS Section 3.6, Containment Systems
12. ITS Section 3.7, Plant Systems
13. ITS Section 3.8, Electrical Power Systems
14. ITS Section 3.9, Refueling Operations
15. ITS Chapter 4.0, Design Features
16. ITS Chapter 5.0, Administrative Controls

Volume 1 is provided to assist the Nuclear Regulatory Commission (NRC) in the review and approval of Volumes 2 through 16. Below is a brief description of the content of each of the volumes in this submittal.

### **Volume 1**

Volume 1 provides details concerning the application of the selection criteria to the PTN Unit 3 and Unit 4 CTS. Each CTS Specification is evaluated, and a determination is made as to whether the CTS Specification meets the criteria in 10 CFR 50.36(c)(2)(ii) for retention in the proposed ITS.

### **Volume 2**

Volume 2 contains generic evaluations required by 10 CFR 50.91(a), which support a finding of No Significant Hazards Consideration (NSHC). Based on the inherent

similarities in the NSHC evaluations, generic evaluations for a finding of NSHC have been provided for the following categories of CTS changes:

- Administrative Changes
- More Restrictive Changes
- Relocated Specifications
- Removed Detail Changes
- Less Restrictive Changes - Category 1 - Relaxation of LCO Requirements
- Less Restrictive Changes - Category 2 - Relaxation of Applicability
- Less Restrictive Changes - Category 3 - Relaxation of Completion Time
- Less Restrictive Changes - Category 4 - Relaxation of Required Action
- Less Restrictive Changes - Category 5 - Deletion of Surveillance Requirement
- Less Restrictive Changes - Category 6 - Relaxation of Surveillance Requirement Acceptance Criteria
- Less Restrictive Changes - Category 7 - Relaxation of Surveillance Frequency
- Less Restrictive Changes - Category 8 - Deletion of Surveillance Requirement Shutdown Performance Requirements

For less restrictive changes not covered by a generic Less Restrictive Change category, specific NSHC evaluations have been provided in the applicable Chapter, Section, or Specification in Volumes 3 through 16. Additionally, specific NSHC evaluations have been provided for changes that have been identified beyond the CTS and the ISTS consistent with the guidance of TSTF-GG-13-01.

In addition, Volume 2 contains an evaluation of environmental consideration in accordance with 10 CFR 51.21. It has been determined that the proposed license amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(b), and no environmental impact statement or environmental assessment need be prepared in connection with the proposed license amendment.

### **Volumes 3 through 16**

Volumes 3 through 16 provide the details and justification to support the proposed changes. Each volume contains the required information to review the conversion to ITS, and include the following:

- Individual Chapter, Section, or Specification, as applicable, in ITS order.
- Relocated/Deleted CTS Specifications (if applicable); and
- ISTS Specifications not adopted in the PTN Unit 3 and Unit 4 ITS (if applicable).

The information for each Chapter, Section, and Specification, as applicable, is organized as follows:

#### CTS Markup and Discussion of Changes (DOCs)

This section contains a markup of the CTS pages, either for CTS pages associated with an Individual ITS Specification or for Relocated/Deleted CTS Specifications, and the DOCs from the CTS. Other CTS license amendment requests under NRC review, as described in Enclosure 4 of this submittal, are not linked to this license amendment

request and have not been incorporated in the proposed change.

The CTS markup pages for each ITS Specification are normally in numerical order. However, more than one CTS Specification is sometimes used in the generation of an ITS Specification. In this case, the CTS pages that are the major contributor to the ITS Specification are shown first, followed by the remaining associated CTS pages in numerical order.

The left-hand margin of the CTS markup pages includes a cross-reference to the equivalent ITS requirement. The upper right-hand corner of the CTS markup pages is annotated with the ITS Specification number to which it applies. Items on the CTS markup pages that are addressed in other proposed ITS Chapters, Sections, or Specifications are annotated with the appropriate reference.

The CTS markup pages are annotated with an alphanumeric designator to identify the differences between the CTS and the proposed ITS. The designator corresponds to a DOC, which provides the description and justification of the change to the CTS. The DOCs are located directly following the associated CTS markup for each Chapter, Section, or Specification, as applicable.

Each proposed change to the CTS is designated as one of the following DOC categories:

<b>Designator</b>	<b>Category</b>
<b>A</b>	ADMINISTRATIVE CHANGES – Changes to the CTS that do not result in new requirements or change operational restrictions or flexibility. These changes are supported in aggregate by a single generic NSHC.
<b>M</b>	MORE RESTRICTIVE CHANGES - Changes to the CTS that result in added restrictions or reduced flexibility. These changes are supported in aggregate by a single generic NSHC.
<b>R</b>	RELOCATED SPECIFICATIONS - Changes to the CTS that relocate specifications that do not meet the selection criteria of 10 CFR 50.36(c)(2)(ii). These changes are supported in aggregate by a single generic NSHC.
<b>LA</b>	REMOVED DETAIL CHANGES - Changes to the CTS that eliminate detail and relocate the detail to a licensee controlled document. Typically, this involves details of system design and function, or procedural detail on methods of conducting a Surveillance Requirement. These changes are supported in aggregate by a single generic NSHC. In addition, the generic type of removed detail change is identified in italics at the beginning of the DOC. The following is a list of the type of removed detail changes: <ul style="list-style-type: none"><li>• Type 1 - Removing Details of System Design and System Description, Including Design Limits</li><li>• Type 2 - Removing Descriptions of System Operation</li></ul>

- Type 3 - Removing Procedural Details for Meeting TS Requirements or Reporting Requirements
- Type 4 - Removal of LCO, SR, or other TS Requirement to the TRM, UFSAR, ODCM, QAP, CLRT Program, IST Program, ISI Program, or Surveillance Frequency Control Program
- Type 5 - Removal of SR Frequency to the Surveillance Frequency Control Program
- Type 6 - Removal of Cycle-Specific Limits from the Technical Specifications to the Core Operating Limits Report

**L** LESS RESTRICTIVE CHANGES - Changes to the CTS that result in reduced restrictions or added flexibility. These changes are supported either in aggregate by a generic NSHC that addresses a particular category of less restrictive change, or by a specific NSHC if the change is not covered by one of the generic categories of less restrictive changes. If the less restrictive change is covered by a generic NSHC, the category of the change is identified in italics at the beginning of the DOC.

The DOCs are numbered sequentially within each letter designator for each ITS Chapter, Section, or Specification.

The CTS Bases pages are replaced in their entirety by the proposed PTN Unit 3 and Unit 4 ITS Bases. Therefore, the CTS Bases markup pages are not provided in the ITS submittal.

#### ISTS Markup and Justification for Deviations (JFDs)

This section contains a markup of the NUREG-1431, Volume 1, ISTS pages, either for ISTS pages associated with an Individual ITS Specification or ISTS Specifications not adopted in the PTN ITS, and JFDs from the ISTS. The ISTS pages are annotated with a numeric designator to identify the differences between the ISTS and the proposed ITS. The designator corresponds to a JFD, which provides the justification for the difference. The JFDs are located directly following the associated ISTS markup for each Chapter, Section, or Specification, as applicable.

The left-hand margin of the ISTS markup pages includes a cross-reference to the equivalent CTS requirement.

#### ISTS Bases Markup and JFDs

This section contains a markup of the NUREG-1431, Volume 2, ISTS Bases pages, either for ISTS Bases pages associated with an Individual ITS Specification or ISTS Specifications not adopted in the PTN Units 3 and 4 ITS, and JFDs from the ISTS Bases. The ISTS Bases pages are annotated with a numeric designator to identify the differences between the ISTS Bases and the proposed ITS Bases. The designator corresponds to a JFD, which provides the justification for the difference. Where a JFD is applicable to only Unit 3 or Unit 4, it is identified as such at the beginning of the



JFD in bold text. The Bases JFDs are located directly following the associated ISTS Bases markup for each Chapter, Section, or Specification, as applicable. The volumes for ITS Chapters 1.0, 4.0, and 5.0 do not include this section, because NUREG-1431 does not include any Bases for these Chapters.

#### Determination of NSHC

This section contains the determination in accordance with 10 CFR 50.91(a)(1) using the criteria of 10 CFR 50.92(c) to support a finding of NSHC. For changes covered by a generic NSHC, the generic NSHCs are in Volume 2. For less restrictive changes not covered by a generic less restrictive category or have been determined to be a change beyond the CTS and the ITS, a specific NSHC evaluation has been performed. Each evaluation is annotated to correspond to the DOC discussed in the specific NSHC evaluation. For ITS Chapters, Sections, or Specifications for which the changes are covered by a generic NSHC evaluation, a statement that there are no specific NSHCs is provided.

**ENCLOSURE 3**

**LICENSEE IDENTIFIED CHANGES THAT MAY  
REQUIRE TECHNICAL BRANCH REVIEW**

**REVISION 1**

|R1

**(2 TOTAL PAGES, INCLUDING COVER SHEETS)**

## LICENSEE IDENTIFIED CHANGES THAT MAY REQUIRE TECHNICAL BRANCH REVIEW

| R1

Changes included in the Improved Technical Specifications (ITS) conversion submittal that are not consistent with the Current Technical Specifications (CTS) and are not the result of adopting the Improved Standard Technical Specifications (ISTS) as described in NUREG-1431, Rev. 5.0. The following is a list of changes identified in Enclosure 2 that meet this criterion in the Turkey Point Nuclear Plant (PTN), Units 3 and 4 ITS conversion submittal, but do not involve a design change to the plant:

1. The periodic frequency of selected Surveillances in ITS Section 5.5 are proposed to be relocated to the Surveillance Frequency Control Program (SFCP). This deviation from ISTS Rev. 5 and Technical Specification Task Force (TSTF) Traveler TSTF-425 has been previously approved for at least three (3) plants. PTN currently has an approved SFCP. Refer to Enclosure 2, Volume 16, ITS 5.5, DOC LA02. | R1
2. PTN Emergency Core Cooling System (ECCS) Operating specification (ITS 3.5.2/CTS 3.5.2) is being changed from requiring four high head safety injection (HHSI) pumps to requiring three HHSI subsystems (one HHSI pump per subsystem), which is consistent with the PTN safety analysis and the requirements for lowest functional capability or performance levels of equipment required for safe operation of the facility as specified in 10 CFR 50.36(c)(2)(i). Refer to Enclosure 2, Volume 10, ITS 3.5.2, DOC L02. | R1
3. PTN Auxiliary Feedwater (AFW) System specification (ITS 3.7.5/CTS 3.7.1.2) is being changed from requiring two trains including 3 AFW pumps and three steam generator (SG) steam supplies to two trains (one AFW pump per train) and 3 SG steam supplies. This change is consistent with the PTN safety analysis and the requirements for lowest functional capability or performance levels of equipment required for safe operation of the facility as specified in 10 CFR 50.36(c)(2)(i). Refer to Enclosure 2, Volume 12, ITS 3.7.5, DOC L01. | R1
4. PTN Component Cooling Water (CCW) System specification (ITS 3.7.7/CTS 3.7.2) is being changed from requiring the CCW System to be OPERABLE with three CCW pumps and two CCW heat exchangers to two CCW trains (each train comprised of one CCW pump and two common CCW heat exchangers). This change is consistent with the PTN safety analysis and the requirements for lowest functional capability or performance levels of equipment required for safe operation of the facility as specified in 10 CFR 50.36(c)(2)(i). Refer to Enclosure 2, Volume 12, ITS 3.7.7, DOC L01. | R1
5. PTN Intake Cooling Water (ICW) System specification (ITS 3.7.8/CTS 3.7.3) is being changed from requiring the ICW System to be OPERABLE with three ICW pumps and two ICW heat exchangers to two ICW trains (one ICW pump and one CCW heat exchanger per train). This change is consistent with the PTN safety analysis and the requirements for lowest functional capability or performance levels of equipment required for safe operation of the facility as specified in 10 CFR 50.36(c)(2)(i). Refer to Enclosure 2, Volume 12, ITS 3.7.8, DOC L01. | R1

**ENCLOSURE 4**

**DISPOSITION OF EXISTING LICENSE AMENDMENT REQUESTS**

**(2 TOTAL PAGES, INCLUDING COVER SHEET)**

**DISPOSITION OF EXISTING LICENSE AMENDMENT REQUESTS**

The following License Amendment Requests are under NRC review. The following table describes the request, and its effect on the ITS conversion, and its disposition.

DISPOSITION OF EXISTING LICENSE AMENDMENT REQUESTS				
Submittal Date	Description of Change	Affected ITS Submittal Sections / Specifications	Affected CTS Sections / Pages	Disposition
April 15, 2021	LAR-273 [ML21105A848] Adopt full spectrum LOCA Methodology. Affects COLR Methodologies	5.6	6-18 6-19	NRC Approved May 24, 2022 [ML22028A066] Changes incorporated
July 30, 2022	LAR 274, [ML22213A045] Reactor Protection System, Engineered Safety Features Actuation System, and Nuclear Instrumentation System Replacement Project	ITS 1.0 ITS 3.1.8 ITS 3.3.1 ITS 3.3.2 ITS 3.3.3 ITS 3.3.6 ITS 3.4.12 ITS 3.4.15 ITS 3.9.3	Section 1.0 Section 2.0 Section 3/4 3.1 Section 3/4 3.2 Section 3/4 3.3 Section 3/4.4.6 Section 3/4.4.9 Section 3/4.9.2 Section 3/4.9.13 Section 3/4.10.3	FPL requested approval by the 2nd Quarter of 2024. FPL will resubmit ITS page markups after ITS Conversion LAR approval
August 26, 2022	LAR 276, [ML22243A162] Revise Fire Protection Program in Support of Reactor Coolant Pump Seal Replacement Project	None	None	Under NRC review.
October 4, 2022	License Amendment Request [ML22278A031] for Common Emergency Plan Consistent with NUREG-0654, Revision 2	None	None	Under NRC Review

**ENCLOSURE 5**

**REGULATORY COMMITMENTS**

**(2 TOTAL PAGES, INCLUDING COVER SHEETS)**

**REGULATORY COMMITMENTS**

No.	Commitments	Due Date/Event
1	<p><b>Commitments for TSTF-500</b> - Revise or develop plant procedures, as applicable, to address the following:</p> <ul style="list-style-type: none"> <li>• minimum required procedural time to measure battery float current is at least 30 seconds or as recommended by the float current measurement instrument manufacturer. This minimum float current measurement time is required to provide a more accurate battery float current reading.</li> <li>• routinely monitor battery room temperature such that a room temperature excursion could reasonably expect to be detected and corrected prior to the average battery electrolyte temperature dropping below the minimum electrolyte temperature.</li> <li>• verification of the selection of the pilot cell or cells when performing the Surveillance that verifies the float voltage of each connected battery cell.</li> <li>• ensure that the modified performance discharge test completely encompasses the load profile of the battery service test and that it adequately confirms the intent of the service test to verify the battery capacity to supply the design basis load profile.</li> </ul>	Upon Implementation
2	<p><b>Commitments for TSTF-500</b> - Relocate the following to the Battery Monitoring and Maintenance Program and implementing procedures:</p> <ul style="list-style-type: none"> <li>• Battery cell resistance limits in existing Surveillance</li> <li>• Monitoring of battery parameters (i.e., specific gravity, electrolyte level, cell temperature, float voltage, connection resistance, and physical condition)</li> </ul>	Upon Implementation

The above table identifies the commitments by Florida Power & Light Company in Enclosure 5 for the Turkey Point Nuclear Plant, Units 3 and 4, conversion to Improved Technical Specifications license amendment request (LAR). Any other statements in this LAR submittal are provided for informational purposes and are not considered regulatory commitments.

**ENCLOSURE 6**

**LIST OF REQUIRED UPDATED FINAL SAFETY ANALYSIS REPORT (UFSAR)  
DESCRIPTIONS FOR TSTF-500**

**(2 TOTAL PAGES, INCLUDING COVER SHEETS)**



**LIST OF REQUIRED UPDATED FINAL SAFETY ANALYSIS REPORT (UFSAR)  
 DESCRIPTIONS FOR TSTF-500**

The following table identifies UFSAR descriptions for the 125 VDC batteries required by Turkey Point Nuclear Generating Station (PTN), Units 3 and Unit 4, as part of the adoption of TSTF-500, Revision 2, "DC Electrical Rewrite - Update to TSTF-360." These changes will be included with the required implementation date in the Issuance of Amendment letter.

REQUIRED UFSAR DESCRIPTION	DUE DATE/EVENT
<p>PTN will change or verify that the UFSAR:</p> <ol style="list-style-type: none"> <li>1. Describes how a 5 percent design margin for the batteries corresponds to a 2 amp float current value indicating that the battery is 95 percent charged.</li> <li>2. States that long term battery performance is supported by maintaining a float voltage greater than or equal to the minimum established design limits provided by the battery manufacturer.</li> <li>3. Describes how the batteries are sized with correction margins that include temperature and aging and how these margins are maintained.</li> <li>4. States the minimum established design limit for battery terminal float voltage.</li> <li>5. States the minimum established design limit for electrolyte level.</li> <li>6. States the minimum established design limit for electrolyte temperature.</li> <li>7. Describes how each battery is designed with additional capacity above that required by the design duty cycles to allow for temperature variations and other factors.</li> <li>8. Describes normal DC system operation, i.e., powered from the battery chargers with the batteries floating on the system, and a loss of normal power to the battery charger describing how the DC load is automatically powered from the station batteries.</li> </ol>	<p>Upon implementation (applies to all)</p>

**ENCLOSURE 7**

**TURKEY POINT NUCLEAR PLANT, UNITS 3 AND 4  
PROPOSED REVISIONS TO SUBSEQUENT RENEWED FACILITY OPERATING  
LICENSES DPR-31 AND DPR-41**

**(25 TOTAL PAGES, INCLUDING COVER SHEET)**

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<b>Proposed Revision to Turkey Point Nuclear Plant Unit No. 3 Subsequent Renewed Facility Operating License No. DPR-31.....</b>	<b>B-1</b>

## **Discussion of Proposed Revisions to Turkey Point Nuclear Plant Units 3 and 4 Operating Licenses**

Converting the Turkey Point Nuclear Plant (PTN) Unit 3 and Unit 4 Technical Specifications to the Improved Technical Specifications (ITS) includes the relocation of certain Technical Specifications previously included in Appendix A of the PTN Units 3 and 4 operating licenses to other licensee-controlled documents. The conversion to the ITS also includes the addition of some Surveillance Requirements (SRs), more restrictive changes to the acceptance criteria of selected SRs, and Frequency interval changes to selected SRs. As a result, Florida Power & Light Company (FPL) proposes a revision to the PTN Unit 3 and Unit 4 subsequent renewed operating licenses to include a license condition regarding implementation of relocated Technical Specification requirements and a schedule for new and revised SRs.

Additionally, a number of license conditions have been satisfied at PTN and are no longer required. As a result, FPL proposes to delete these license conditions.

Attachments A and B of this enclosure provide proposed revisions to Subsequent Renewed Facility Operating Licenses DPR-31 (Unit 3) and DPR-41 (Unit 4), respectively.

The following provides a discussion of each license condition proposed for deletion with a justification for acceptability.

### License Condition C, "Final Safety Analysis Report

License Condition C states, "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 referenced inspected activities have been completed. Therefore, the subject license condition is no longer necessary and can be deleted.

### Transition License Conditions of License Condition 3.D

License Condition 3.D, Fire Protection, specify three transition license conditions that were required to be completed before achieving full compliance with 10 CFR 50.48(c) for the PTN Fire Protection Program (FPP).

- Transition License Condition #1 prevented risk informed changes to the FPP until Transition License Conditions #2 and #3 were completed unless approved by the NRC beforehand or the change was demonstrated to have no more than a minimal risk impact.
- Transition License Condition #2 required the completion of the facility modifications described in Enclosure 1, Attachment S, Table S-2 of Reference 6.3 by the end of

the second refueling outage following issuance of License Amendments 262 and 257 (Reference 1).

- Transition License Condition #3 required the completion of the items listed in Enclosure 5, Attachment S, Table S-3 of Reference 6.5, with the exception of items 12, 18 and 19, by no later than 12 months after the issuance of License Amendments 262 and 257 (Reference 1).

These three transient license conditions are no longer necessary since the required facility modifications have been completed and the applicable items specified by Transition License Condition #3 have been completed. As such, these transient license conditions can be deleted.

#### License Condition 3.H

License Condition 3.H, PAD TCD Safety Analyses, specify license conditions for the use of the Performance Analysis and Design Model (PAD) methodology in the safety analyses.

License Condition 3.H requires FPL, within six months of the NRC approving a new, generic version of PAD 4.0 that accounts for thermal conductivity degradation (TCD), to either:

- Demonstrate that PAD 4.0 TCD remains conservatively bounding in licensing basis analyses when compared to the new generically approved version of PAD w/TCD, or
- Provide a schedule for the re-analysis using the new generically approved version of PAD w/TCD for any of the affected licensing basis analyses.

FPL satisfied License Condition 3.H within six months of the NRC approving a new, generic version of PAD 4.0 w/TCD by providing the schedule for re-analyzing the affected safety analyses using the NRC approved PAD 5.0 methodology (Reference 2). As such, License Condition 3.H has been satisfied and can be deleted.

#### License Condition 3.I.1

License Condition 3.I.1 required completion of the items listed in the table of implementation items in the enclosure to FPL letter L-2018-118 dated June 12, 2018, prior to implementation of the Risk Informed Completion Time (RICT) Program. The items listed in the table of implementation items in the enclosure to FPL letter L-2018-118 were completed prior to implementation of the PTN Unit 3 and Unit 4 RICT program, as required. As such, the License Condition 3.I.1 has been satisfied and can be deleted.

## References

1. NRC Letter to NextEra Energy, Turkey Point Nuclear Generating Unit Nos. 3 and 4 - Issuance of Amendments Regarding Transition to a Risk-Informed, Performance-Based Fire Protection Program in Accordance with Title 10 of the Code of Federal Regulations Section 50.48(c) (TAC Nos. ME8990 and ME8991) May 28, 2015 (ADAMS Accession No. ML15061A237)
2. Florida Power & Light Letter L-2018-077, Schedule for Re-Analysis of Turkey Point Licensing Basis Analyses Affected by PAD5 Implementation, March 27, 2018 (ADAMS Accession No. ML18086A154)

**ATTACHMENT A**

**PROPOSED REVISION TO  
TURKEY POINT NUCLEAR PLANT UNIT No. 3  
SUBSEQUENT RENEWED FACILITY OPERATING LICENSE No. DPR-31**



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

SUBSEQUENT RENEWED FACILITY OPERATING LICENSE NO. DPR-31

The U.S. Nuclear Regulatory Commission (the Commission) having previously made the findings set forth in Renewed License No. DPR-31 issued on June 6, 2002, has now found that:

- a. The application for Subsequent Renewed Facility Operating License No. DPR-31 filed by Florida Power and Light Company, 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 and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the subsequent period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this subsequent renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Turkey Point Unit 3 plant, and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
- d. There is reasonable assurance (i) that the facility can be operated at steady state power levels up to 2644 megawatts thermal in accordance with this subsequent renewed operating license without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
- e. Florida Power and Light Company is technically and financially qualified to engage in the activities authorized by this subsequent renewed operating license in accordance with the rules and regulations of the Commission;
- f. The applicable provisions of 10 CFR Part 140 have been satisfied;
- g. The subsequent renewal of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public; and
- h. After weighing the environmental, economic, technical and other benefits of the facility against environmental costs and considering available alternatives, the issuance of Subsequent Renewed Facility Operating License No. DPR-31 is in accordance with



10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

On the basis of the foregoing findings regarding this facility, Renewed Facility Operating License No. DPR-31, issued on June 6, 2002, is superseded by Subsequent Renewed Facility Operating License No. DPR-31, which is hereby issued to Florida Power and Light Company (FPL), to read as follows:

1. This subsequent renewed operating license applies to the Turkey Point Nuclear Generating Unit No. 3 nuclear power reactor, a pressurized, light water moderated and cooled reactor, and associated steam generators and electrical generating equipment (the facility). The facility is located on the applicant's Turkey Point site in Miami-Dade County, about 25 miles south of Miami, Florida, and is described in the Final Safety Analysis Report as supplemented and amended, and the Environmental Report as supplemented and amended.
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses FPL:
  - A. Pursuant to Section 104b of the Atomic Energy Act of 1954, as amended (the Act), and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility as a utilization facility at the designated location on the Turkey Point site, in accordance with the procedures and limitations set forth in this subsequent renewed operating license;
  - B. Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
  - C. Pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
  - D. Pursuant to the Act and 10 CFR Part 30 to receive, possess, and use at any time 100 millicuries each of any byproduct material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactively contaminated apparatus;
  - 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 subsequent 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. ~~296~~297, are hereby incorporated into this subsequent renewed license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this subsequent renewed operating license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

C. Final Safety Analysis Report Deleted.

~~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.~~

D. Fire Protection

FPL shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the licensee amendment requests dated June 28, 2012 and October 17, 2018 (and supplements dated September 19, 2012; March 18, April 16, and May 15, 2013; January 7, April 4, June 6, July 18, September 12, November 5, and December 2, 2014; and February 18, 2015; October 24, and December 3, 2018; and January 31, 2019), and as approved in the safety evaluations dated May 28, 2015 and March 27, 2019. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the

change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

- (a) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.
- (b) Prior NRC review and approval is not required for individual changes that result in a risk increase less than  $1 \times 10^{-7}$ /year (yr) for CDF and less than  $1 \times 10^{-8}$ /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

#### Other Changes that May Be Made Without Prior NRC Approval

1. Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program  
 Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. The licensee may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- "Fire Alarm and Detection Systems" (Section 3.8);
- "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);
- "Gaseous Fire Suppression Systems" (Section 3.10); and
- "Passive Fire Protection Features" (Section 3.11).

This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

2. Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee's fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation dated May 28, 2015, to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

Transition License Conditions

- ~~1. Before achieving full compliance with 10 CFR 50.48(c), as specified by 2. and 3. below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in 2. above.~~
- ~~2. The licensee shall implement the modifications to its facility, as described in Enclosure 1, Attachment S, Table S-2, "Plant Modifications Committed," of FPL letter L-2014-303, dated 11/05/2014, to complete the transition to full compliance with 10 CFR 50.48(c) by the end of the second refueling outage (for each unit) following issuance of the license amendment. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.~~
- ~~3. The licensee shall implement the items listed in Enclosure 5, Attachment S, Table S-3, "Implementation Items," of FPL letter L-2018-219, dated 12/3/2018, with the exception of items 12, 18 and 19, no later than 12 months after issuance of the license amendment dated 5/28/2015. Items 12, 18 and 19 are associated with modifications in Table S-2 and will be completed in accordance with Transition License Condition 2 above.~~

- E. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provision of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Florida Power and Light Turkey Point Nuclear Plant Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Independent Spent Fuel Storage Installation Security Program - Revision 15" submitted by letter dated August 3, 2012.

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Turkey Point Nuclear Generating Station CSP was approved by License Amendment No. 245 as supplemented by a change approved by Amendment Nos. 256 and 266.

- F. 1. The licensee shall restrict the combined number of fuel assemblies loaded in the existing spent fuel pool storage racks and cask pit rack to no more than the capacity of the spent fuel pool storage racks. This condition applies at all times, except during activities associated with a reactor core offload/reload refueling condition. This restriction will ensure the capability to unload and remove the cask pit rack when cask loading operations are necessary.
2. The licensee shall establish two hold points within the rack installation procedure to ensure proper orientation of the cask rack in each unit's spent fuel pool. Verification of proper cask pit rack orientation will be implemented by an authorized Quality Control inspector during installation of the racks to ensure consistency with associated spent fuel pool criticality analysis assumptions.

G. Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
1. Pre-defined coordinated fire response strategy and guidance
  2. Assessment of mutual aid fire fighting assets
  3. Designated staging areas for equipment and materials
  4. Command and control
  5. Training of response personnel
- (b) Operations to mitigate fuel damage considering the following
1. Protection and use of personnel assets
  2. Communications
  3. Minimizing fire spread
  4. Procedures for implementing integrated fire response strategy
  5. Identification of readily-available pre-staged equipment
  6. Training on integrated fire response strategy
  7. Spent fuel pool mitigation measures
- (c) Actions to minimize release to include consideration of:
1. Water spray scrubbing
  2. Dose to onsite responders

H. ~~Deleted~~ PAD TCD Safety Analyses

- ~~1. PAD 4.0 TCD has been specifically approved for use for the Turkey Point licensing basis analyses. Upon NRC's approval of a revised generic version of PAD that accounts for Thermal Conductivity Degradation (TCD), FPL will within six months:~~
- ~~a. Demonstrate that PAD 4.0 TCD remains conservatively bounding in licensing basis analyses when compared to the new generically approved version of PAD w/TCD, or~~
  - ~~b. Provide a schedule for the re-analysis using the new generically approved version of PAD w/TCD for any of the affected licensing basis analyses~~

- I. FPL is authorized to implement the Risk Informed Completion Time Program as approved in License Amendment No. 284 subject to the following conditions:

1. ~~Deleted FPL will complete the items listed in the table of implementation items in the enclosure to FPL letter L 2018-118 dated June 12, 2018 prior to implementation of the Risk Informed Completion Time Program.~~
2. The risk assessment approach and methods, shall be acceptable to the NRC, be based on the as-built, as-operated, and maintained plant, and reflect the operating experience of the plant as specified in RG 1.200. Methods to assess the risk from extending the completion times must be PRA methods accepted as part of this license amendment, or other methods approved by the NRC for generic use. If the licensee wishes to change its methods, and the change is outside the bounds of this license condition, the licensee will seek prior NRC approval via a license amendment.

J. Subsequent License Renewal License Conditions

1. The information in the Final Safety Analysis Report (FSAR) supplement submitted pursuant to 10 CFR 54.21(d), as revised during the subsequent license renewal application review process, and FPL commitments as listed in Appendix A of the "Safety Evaluation Report Related to the Subsequent License Renewal of Turkey Point Generating Units 3 and 4," dated July 22, 2019, are collectively the "Subsequent License Renewal FSAR Supplement." This Supplement is henceforth part of the FSAR, which will be updated in accordance with 10 CFR 50.71(e). As such, FPL may make changes to the programs, activities, and commitments described in the Subsequent License Renewal FSAR Supplement, provided FPL evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59, "Changes, Tests, and Experiments," and otherwise complies with the requirements in that section.
2. The Subsequent License Renewal FSAR Supplement, as defined in renewed license condition (J)(1) above, describes programs to be implemented and activities to be completed prior to the subsequent period of extended operation, which is the period following the July 19, 2032, expiration of the initial renewed license.
  - a. FPL shall implement those new programs and enhancements to existing programs no later than 6 months before the subsequent period of extended operation.
  - b. FPL shall complete those activities by the 6-month date prior to the subsequent period of extended operation or by the end of the last refueling outage before the subsequent period of extended operation, whichever occurs later.
  - c. FPL shall notify the NRC in writing within 30 days after having accomplished item (2)(a) above and include the status of those activities that have been or remain to be completed in item (2)(b) above.
3. FPL shall complete the replacement of a portion of the existing containment spray system carbon steel piping with stainless steel piping by December 1, 2024, so that any remaining carbon steel piping will not normally be internally exposed to borated water during the subsequent period of extended operation. The scope of replacement is the carbon steel piping from the stainless steel to the carbon steel dissimilar metal weld for the two containment

spray piping headers (3A and 3B) at penetrations P-19A and P-19B to a minimum plant elevation of 65 feet inside containment. FPL shall notify the NRC in writing within 60 days following completion of the refueling outage during which the piping replacement is completed. The notification will confirm the elevation of the air-to-borated-water interface inside the piping and confirm that the installation of the stainless steel piping exceeds this elevation.

4. This subsequent renewed license is effective as of the date of issuance, and shall expire at midnight July 19, 2052.

K. Improved Technical Specifications Implementation License Conditions

1. Relocation of Certain Technical Specification Requirements

License Amendment 297 authorizes the relocation of certain Technical Specifications previously included in Appendix A to other licensee-controlled documents. Implementation of this amendment shall include relocation of the requirements to the specified documents, as described in Table R, Relocated Specifications and Removed Detail Changes, attached to the NRC staff's Safety Evaluation, which is enclosed in this amendment.

2. Schedule for New and Revised Surveillance Requirements (SRs)

The schedule for performing SRs that are new or revised in License Amendment 297 shall be as follows:

- a. For SRs that are new in this amendment, the first performance is due at the end of the first Surveillance interval, which begins on the date of implementation of this amendment.
- b. For SRs that existed prior to this amendment, whose intervals of performance are being reduced, the first reduced Surveillance interval begins upon completion of the first Surveillance performed after implementation of this amendment.
- c. For SRs that existed prior to this amendment, whose intervals of performance are being extended, the first extended Surveillance interval begins upon completion of the last Surveillance performed prior to implementation of this amendment.
- d. For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance subject to the modified acceptance criteria is due at the end of the first Surveillance interval that began on the date the Surveillance was last performed prior to the implementation of this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Ho K. Nieh, Director  
Office of Nuclear Reactor Regulation

Attachments:

Appendix A - Technical Specifications for Unit 3

Appendix B - Environmental Protection Plan

Date of Issuance: December 4, 2019



**ATTACHMENT B**

**PROPOSED REVISION TO  
TURKEY POINT NUCLEAR PLANT UNIT No. 4  
SUBSEQUENT RENEWED FACILITY OPERATING LICENSE No. DPR-41**



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

SUBSEQUENT RENEWED FACILITY OPERATING LICENSE NO. DPR-41

The U.S. Nuclear Regulatory Commission (the Commission) having previously made the findings set forth in Renewed License No. DPR-41 issued on June 6, 2002, has now found that:

- a. The application for Subsequent Renewed Facility Operating License No. DPR-41 filed by Florida Power and Light Company, 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 and all required notifications to other agencies or bodies have been duly made;
- b. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the subsequent period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this subsequent renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Turkey Point Unit 4 plant, and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
- c. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
- d. There is reasonable assurance (i) that the facility can be operated at steady state power levels up to 2644 megawatts thermal in accordance with this subsequent renewed operating license without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission;
- e. Florida Power and Light Company is technically and financially qualified to engage in the activities authorized by this subsequent renewed operating license in accordance with the rules and regulations of the Commission;
- f. The applicable provisions of 10 CFR Part 140 have been satisfied;
- g. The subsequent renewal of this renewed operating license will not be inimical to the common defense and security or to the health and safety of the public; and
- h. After weighing the environmental, economic, technical and other benefits of the facility against environmental costs and considering available alternatives, the issuance of Subsequent Renewed Facility Operating License No. DPR-41 is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

On the basis of the foregoing findings regarding this facility, Renewed Facility Operating License No. DPR-41, issued on June 6, 2002, is superseded by Subsequent Renewed Facility Operating License No. DPR-41, which is hereby issued to Florida Power and Light Company (FPL), to read as follows:

1. This subsequent renewed operating license applies to the Turkey Point Nuclear Generating Unit No. 4 nuclear power reactor, a pressurized, light water moderated and cooled reactor, and associated steam generators and electrical generating equipment (the facility). The facility is located on the applicant's Turkey Point site in Miami-Dade County, about 25 miles south of Miami, Florida, and is described in the Final Safety Analysis Report as supplemented and amended, and the Environmental Report as supplemented and amended.
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses FPL:
  - A. Pursuant to Section 104b of the Atomic Energy Act of 1954, as amended (the Act), and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility as a utilization facility at the designated location on the Turkey Point site, in accordance with the procedures and limitations set forth in this subsequent renewed operating license;
  - B. Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;
  - C. Pursuant to the Act and 10 CFR Parts 30, 40, and 70 to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
  - D. Pursuant to the Act and 10 CFR Part 30 to receive, possess, and use at any time 100 millicuries each of any byproduct material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactively contaminated apparatus;
  - 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 subsequent 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. ~~289~~290, are hereby incorporated into this subsequent renewed operating license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into this subsequent renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

C. ~~Final Safety Analysis Report~~ Deleted

~~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.~~

D. Fire Protection

FPL shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the licensee amendment requests dated June 28, 2012 and October 17, 2018 (and supplements dated September 19, 2012; March 18, April 16, and May 15, 2013; January 7, April 4, June 6, July 18, September 12, November 5, and December 2, 2014; and February 18, 2015; October 24, and December 3, 2018; and January 31, 2019), and as approved in the safety evaluations dated May 28, 2015 and March 27, 2019. Except where NRC approval for changes or deviations is required by 10 CFR 50.48(c), and provided no other regulation, technical specification, license condition or requirement would require prior NRC approval, the licensee may make changes to the fire protection program without prior approval of the Commission if those changes satisfy the provisions set forth in 10 CFR 50.48(a) and 10 CFR 50.48(c), the change does not require a change to a technical specification or a license condition, and the criteria listed below are satisfied.

Risk-Informed Changes that May Be Made Without Prior NRC Approval

A risk assessment of the change must demonstrate that the acceptance criteria below are met. The risk assessment approach, methods, and data shall be acceptable to the NRC and shall be appropriate for the nature and scope of the change being evaluated; be based on the as-built, as-operated, and maintained plant; and reflect the operating experience at the plant. Acceptable methods to assess the risk of the change may include methods that have been used in the

peer-reviewed fire PRA model, methods that have been approved by NRC through a plant-specific license amendment or NRC approval of generic methods specifically for use in NFPA 805 risk assessments, or methods that have been demonstrated to bound the risk impact.

- (a) Prior NRC review and approval is not required for changes that clearly result in a decrease in risk. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.
- (b) Prior NRC review and approval is not required for individual changes that result in a risk increase less than  $1 \times 10^{-7}$ /year (yr) for CDF and less than  $1 \times 10^{-8}$ /yr for LERF. The proposed change must also be consistent with the defense-in-depth philosophy and must maintain sufficient safety margins. The change may be implemented following completion of the plant change evaluation.

#### Other Changes that May Be Made Without Prior NRC Approval

1. Changes to NFPA 805, Chapter 3, Fundamental Fire Protection Program  
 Prior NRC review and approval are not required for changes to the NFPA 805, Chapter 3, fundamental fire protection program elements and design requirements for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is functionally equivalent or adequate for the hazard. The licensee may use an engineering evaluation to demonstrate that a change to an NFPA 805, Chapter 3, element is functionally equivalent to the corresponding technical requirement. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard.

The licensee may use an engineering evaluation to demonstrate that changes to certain NFPA 805, Chapter 3, elements are acceptable because the alternative is "adequate for the hazard." Prior NRC review and approval would not be required for alternatives to four specific sections of NFPA 805, Chapter 3, for which an engineering evaluation demonstrates that the alternative to the Chapter 3 element is adequate for the hazard. A qualified fire protection engineer shall perform the engineering evaluation and conclude that the change has not affected the functionality of the component, system, procedure, or physical arrangement, using a relevant technical requirement or standard. The four specific sections of NFPA 805, Chapter 3, are as follows:

- "Fire Alarm and Detection Systems" (Section 3.8);
- "Automatic and Manual Water-Based Fire Suppression Systems" (Section 3.9);
- "Gaseous Fire Suppression Systems" (Section 3.10); and
- "Passive Fire Protection Features" (Section 3.11).

This License Condition does not apply to any demonstration of equivalency under Section 1.7 of NFPA 805.

2. Fire Protection Program Changes that Have No More than Minimal Risk Impact

Prior NRC review and approval are not required for changes to the licensee's fire protection program that have been demonstrated to have no more than a minimal risk impact. The licensee may use its screening process as approved in the NRC safety evaluation dated May 28, 2015, to determine that certain fire protection program changes meet the minimal criterion. The licensee shall ensure that fire protection defense-in-depth and safety margins are maintained when changes are made to the fire protection program.

Transition License Conditions

- ~~1. Before achieving full compliance with 10 CFR 50.48(c), as specified by 2. and 3. below, risk-informed changes to the licensee's fire protection program may not be made without prior NRC review and approval unless the change has been demonstrated to have no more than a minimal risk impact, as described in 2. above.~~
- ~~2. The licensee shall implement the modifications to its facility, as described in Enclosure 1, Attachment S, Table S-2, "Plant Modifications Committed," of FPL letter L-2014-303, dated 11/05/2014, to complete the transition to full compliance with 10 CFR 50.48(c) by the end of the second refueling outage (for each unit) following issuance of the license amendment. The licensee shall maintain appropriate compensatory measures in place until completion of these modifications.~~
- ~~3. The licensee shall implement the items listed in Enclosure 5, Attachment S, Table S-3, "Implementation Items," of FPL letter L-2018-219, dated 12/3/2018, with the exception of items 12, 18 and 19, no later than 12 months after issuance of the license amendment dated 5/28/2015. Items 12, 18 and 19 are associated with modifications in Table S-2 and will be completed in accordance with Transition License Condition 2 above.~~

- E. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provision of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contains Safeguards Information protected under 10 CFR 73.21, is entitled: "Florida Power and Light Turkey Point Nuclear Plant Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Independent Spent Fuel Storage Installation Security Program - Revision 15" submitted by letter dated August 3, 2012.

The licensee shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The Turkey Point Nuclear Generating Station CSP was approved by License Amendment No. 241 as supplemented by a change approved by Amendment Nos. 252 and 261.

- F. 1. The licensee shall restrict the combined number of fuel assemblies loaded in the existing spent fuel pool storage racks and cask pit rack to no more than the capacity of the spent fuel pool storage racks. This condition applies at all times,

except during activities associated with a reactor core offload/reload refueling condition. This restriction will ensure the capability to unload and remove the cask pit rack when cask loading operations are necessary.

2. The licensee shall establish two hold points within the rack installation procedure to ensure proper orientation of the cask rack in each unit's spent fuel pool. Verification of proper cask pit rack orientation will be implemented by an authorized Quality Control inspector during installation of the racks to ensure consistency with associated spent fuel pool criticality analysis assumptions.

G. Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
  1. Pre-defined coordinated fire response strategy and guidance
  2. Assessment of mutual aid fire fighting assets
  3. Designated staging areas for equipment and materials
  4. Command and control
  5. Training of response personnel
- (b) Operations to mitigate fuel damage considering the following
  1. Protection and use of personnel assets
  2. Communications
  3. Minimizing fire spread
  4. Procedures for implementing integrated fire response strategy
  5. Identification of readily-available pre-staged equipment
  6. Training on integrated fire response strategy
  7. Spent fuel pool mitigation measures
- (c) Actions to minimize release to include consideration of:
  1. Water spray scrubbing
  2. Dose to onsite responders

H. ~~Deleted~~ PAD TCD Safety Analyses

- ~~1. PAD 4.0 TCD has been specifically approved for use for the Turkey Point licensing basis analyses. Upon NRC's approval of a revised generic version of PAD that accounts for Thermal Conductivity Degradation (TCD), FPL will within six months:
 
  - ~~a. Demonstrate that PAD 4.0 TCD remains conservatively bounding in licensing basis analyses when compared to the new generically approved version of PAD w/TCD, or~~
  - ~~b. Provide a schedule for the re-analysis using the new generically approved version of PAD w/TCD for any of the affected licensing basis analyses~~~~

- I. FPL is authorized to implement the Risk Informed Completion Time Program as approved in License Amendment No. 278 subject to the following conditions:

1. ~~Deleted~~ FPL will complete the items listed in the table of implementation items in the enclosure to FPL letter L-2018-118 dated June 12, 2018 prior to implementation of the Risk Informed Completion Time Program.

2. The risk assessment approach and methods, shall be acceptable to the NRC, be based on the as-built, as-operated, and maintained plant, and reflect the operating experience of the plant as specified in RG 1.200. Methods to assess the risk from extending the completion times must be PRA methods accepted as part of this license amendment, or other methods approved by the NRC for generic use. If the licensee wishes to change its methods, and the change is outside the bounds of this license condition, the licensee will seek prior NRC approval via a license amendment.

J. Subsequent License Renewal License Conditions

1. The information in the Final Safety Analysis Report (FSAR) supplement submitted pursuant to 10 CFR 54.21(d), as revised during the subsequent license renewal application review process, and FPL commitments as listed in Appendix A of the "Safety Evaluation Report Related to the Subsequent License Renewal of Turkey Point Generating Units 3 and 4," dated July 22, 2019, are collectively the "Subsequent License Renewal FSAR Supplement." This Supplement is henceforth part of the FSAR, which will be updated in accordance with 10 CFR 50.71(e). As such, FPL may make changes to the programs, activities, and commitments described in the Subsequent License Renewal FSAR Supplement, provided FPL evaluates such changes pursuant to the criteria set forth in 10 CFR 50.59, "Changes, Tests, and Experiments," and otherwise complies with the requirements in that section.
2. The Subsequent License Renewal FSAR Supplement, as defined in renewed license condition (J)(1) above, describes programs to be implemented and activities to be completed prior to the subsequent period of extended operation, which is the period following the April 10, 2033, expiration of the initial renewed license.
  - a. FPL shall implement those new programs and enhancements to existing programs no later than 6 months before the subsequent period of extended operation.
  - b. FPL shall complete those activities by the 6-month date prior to the subsequent period of extended operation or by the end of the last refueling outage before the subsequent period of extended operation, whichever occurs later.
  - c. FPL shall notify the NRC in writing within 30 days after having accomplished item (2)(a) above and include the status of those activities that have been or remain to be completed in item (2)(b) above.
3. FPL shall complete the replacement of a portion of the existing containment spray system carbon steel piping with stainless steel piping by December 1, 2024, so that any remaining carbon steel piping will not normally be internally exposed to borated water during the subsequent period of extended operation. The scope of replacement is the carbon steel piping from the stainless steel to the carbon steel dissimilar metal weld for the two containment spray piping headers (4A and 4B) at penetrations P-19A and P-19B to a minimum plant elevation of 65 feet inside containment. FPL shall notify the NRC in writing within 60 days following completion of the refueling outage during which the piping replacement is completed. The notification will confirm the elevation of



the air-to-borated water interface inside the piping, and confirm that the installation of the stainless steel piping exceeds this elevation.

4. This subsequent renewed license is effective as of the date of issuance, and shall expire at midnight April 10, 2053.

K. Improved Technical Specifications Implementation License Conditions

1. Relocation of Certain Technical Specification Requirements

License Amendment 290 authorizes the relocation of certain Technical Specifications previously included in Appendix A to other licensee-controlled documents. Implementation of this amendment shall include relocation of the requirements to the specified documents, as described in Table R, Relocated Specifications and Removed Detail Changes, attached to the NRC staff's Safety Evaluation, which is enclosed in this amendment.

2. Schedule for New and Revised Surveillance Requirements (SRs)

The schedule for performing SRs that are new or revised in License Amendment 290 shall be as follows:

- a. For SRs that are new in this amendment, the first performance is due at the end of the first Surveillance interval, which begins on the date of implementation of this amendment.
- b. For SRs that existed prior to this amendment, whose intervals of performance are being reduced, the first reduced Surveillance interval begins upon completion of the first Surveillance performed after implementation of this amendment.
- c. For SRs that existed prior to this amendment, whose intervals of performance are being extended, the first extended Surveillance interval begins upon completion of the last Surveillance performed prior to implementation of this amendment.
- d. For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance subject to the modified acceptance criteria is due at the end of the first Surveillance interval that began on the date the Surveillance was last performed prior to the implementation of this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION

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Ho K. Nieh, Director  
Office of Nuclear Reactor Regulation

Attachments:

Appendix A - Technical Specifications for Unit 4

Appendix B - Environmental Protection Plan

Date of Issuance: December 4, 2019