



December 3, 2018  
L-2018-219  
10 CFR 50.90

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington D C 20555-0001

RE: Turkey Point Nuclear Generating Station, Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Renewed Facility Operating Licenses DPR-31 and DPR-41

Supplement to License Amendment Request 265, Revise NFPA 805 License Condition for Reactor Coolant Pump Seals

References:

1. FPL Letter L-2018-170, "License Amendment Request 265, Revise NFPA 805 License Condition for Reactor Coolant Pump Seals", October 17, 2018 (Accession No. ML18290A862)
2. FPL Letter L-2018-198, "Requested Approval for License Amendment Request 265, Revise NFPA 805 License Condition for Reactor Coolant Pump Seals", October 24, 2018 (Accession No. ML18297A032)
3. NRC letter to Westinghouse Owners Group, "Final Safety Evaluation for Pressurized Water Reactor Owners Group (PWROG) Topical Report WCAP-16175-P, Revision 0, (CE NPSD-1199, Revision 1) "Model for Failure of RCP Seals Given Loss of Seal Cooling in CE NSSS Plants" (TAC No. MB5803)" dated February 12, 2007 (ADAMS Accession No. ML070240429)
4. NRC Letter to FPL "Turkey Point Nuclear Generating Unit Nos. 3 and 4 - Supplemental Information Needed for Acceptance of License Amendment Request to Revise NFPA 805 License Condition for Reactor Coolant Pump Seals (EPID L-2018-LLA-0280)", November 19, 2018 (Accession No. ML18318A433)

In Reference 1, as supplemented by Reference 2, Florida Power & Light Company (FPL) requested amendments to Renewed Facility Operating Licenses (RFOL) DPR-31 and DPR 41 for Turkey Point Nuclear Plant, Units 3 and 4 (Turkey Point), respectively. The proposed license amendments remove reliance on the Flowserve Reactor Coolant Pump (RCP) Seal Topical Report as a condition of Turkey Point's transition to NFPA 805, and document the application of WCAP-16175-P-A (Reference 3) for modeling RCP seal leakage in the Turkey Point Probabilistic Risk Assessment (PRA).

In Reference 4, the NRC staff requested supplemental information deemed necessary to complete its acceptance review of the requested license amendments.

Enclosure 1 to this letter provides FPL's response to the supplemental information request and replaces Enclosure 1 of Reference 1 in its entirety. Enclosures 2 and 3 provide mark-ups and revised versions of Attachment M. Enclosures 2 and 3 supersede and replace Enclosures 2 and 3 provided in Reference 1. Enclosures 4 and 5 provide mark-ups and revised versions of Attachment S, Table S-3. Enclosures 4 and 5 supersede and replace those submitted in Reference 1. Enclosures 6 and 7 provide mark-ups and revised versions of Attachment W (Sections W.1, W.2 and Table W-1) of the previously approved NFPA 805 submittal for Turkey Point. Enclosures 6 and 7 supersede and replace the Enclosures 6 and 7

Security-Related Information - Withhold From Public Disclosure Under 10 CFR 2.390. Enclosures 4, 5, 6 and 7 to this letter contain security-related information. Upon removal of Enclosures 4, 5, 6 and 7, this letter is uncontrolled.

submitted in Reference 1. Enclosures 8 and 9 provide marked-up and retyped pages of the RFOLs, respectively Enclosures 8 and 9 supersede and replace their respective Enclosures submitted in Reference 1.

Enclosures 4, 5, 6 and 7 to this letter contain sensitive Security-Related Information; therefore, FPL requests that it be withheld from public disclosure in accordance with 10 CFR 2.390.

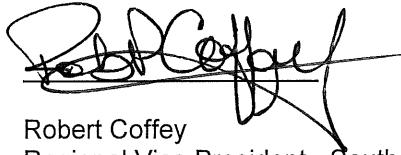
FPL has determined that this supplement does not alter the conclusion in Reference 1 that the change does not involve a significant hazards consideration pursuant to 10 CFR 50.92, and that there are no significant environmental impacts associated with this change. In accordance with 10 CFR 50.91(b)(1), a copy of the LAR supplement is being forwarded to the State designee for the State of Florida.

This letter contains no new or revised regulatory commitments.

If you have any questions or require additional information, please contact Mr. Robert Hess, Turkey Point Licensing Manager, at (305) 246-4112.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on December 3, 2018.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Coffey", with a horizontal line drawn through the middle of the signature.

Robert Coffey  
Regional Vice President - Southern Region  
Florida Power & Light Company

Enclosures

cc: USNRC Regional Administrator, Region II  
USNRC Project Manager, Turkey Point Nuclear Generating Station  
USNRC Senior Resident Inspector, Turkey Point Nuclear Generating Station  
Ms. Cindy Becker, Florida Department of Health

**ENCLOSURE 1**  
**EVALUATION OF THE PROPOSED CHANGE**

Turkey Point Nuclear Generating Station, Unit 3 and Unit 4  
License Amendment Request to Revise Commitment  
Associated with Implementation of NFPA 805

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## 1.0 SUMMARY DESCRIPTION

Pursuant to 10 CFR Part 50.90, Florida Power & Light (FPL) requests amendments to RFOL DPR-31 and DPR-41 for Turkey Point Nuclear Generating Station, Units 3 and 4 (Turkey Point), respectively. The proposed license amendment modifies the Units 3 and 4 Operating Licenses, Paragraph 3.D, "Transition License Conditions," Item 3 (Reference 6.1), to eliminate Implementation Item 22 (References 6.2 and 6.3). The proposed change removes reliance on NRC approval of the Flowserve RCP Seal Topical Report as a condition of Turkey Point's transition to NFPA 805, and instead documents use of the guidance outlined in NRC approved WCAP-16175-P-A (Reference 6.4) for modeling of RCP seal leakage in the station Probabilistic Risk Assessment (PRA).

The guidance in the March 2, 2016, letter from the NRC to the Nuclear Energy Institute (NEI) (Reference 6.5) was used to develop this LAR.

## 2.0 DETAILED DESCRIPTION

### 2.1 NRC Guidance for Changes to License Conditions Established to Adopt NFPA 805

In Reference 6.5, the NRC provided guidance for developing a LAR for licensees wishing to modify an implementation obligation of the NFPA 805 amendment after it has been issued, but prior to full implementation. The NRC provided three options for licensees to provide the necessary information for NRC to review in a timely manner; the most germane option for the FPL proposed change to the approved NFPA 805 implementation is Option B. FPL used the guidance in Option B because the requested change uses a fire PRA approach that has been accepted in a final safety evaluation for another station where the license amendment for the transition to NFPA 805 has been approved. NRC recommended that the following information be provided for an Option B approval:

- i. A summary of all changes to the modifications;
- ii. A summary of all changes to the PRA models and explanations for each change;
- iii. New, updated versions in their entirety of: the License Condition (Attachment M), list of plant modifications (Attachment S), and the summarizing area wide change-in-risk result tables (Attachment W);
- iv. A statement that the defense-in-depth (DID) and safety margin evaluations associated with the original LAR have been completed on the proposed changes;
- v. A summary of all accepted PRA methods being used that weren't used in the NFPA 805 amendment request and a reference to the NRC document accepting the method (i.e., the method should have been previously accepted by NRR staff);
- vi. A demonstration of the applicability of the accepted method for the configuration and conditions to which it is being applied;

- vii. A summary of the changes made to the Nuclear Safety Capability Analysis (NSCA) and associated changes to LAR Attachments C and G that reflect any changes in compliance strategies being used on a fire area basis in redline/strikeout; and
- viii. A justification for the creation of new and/or removal of previously existing Variances from Deterministic Requirements (VFDRs) and Recovery Actions (RAs).

Items i, ii, iv, v, vi, vii and viii are provided in this Enclosure. For Item iii, Enclosures 2 and 3 provide marked-up and retyped versions of Attachment M, respectively, to reflect the proposed changes to Turkey Point, Units 3 and 4, RFOLs paragraph 3.D. Enclosures 4 and 5 provide marked-up and re-typed versions of Attachment S, respectively, to reflect the proposed removal of Item 22 from Table S-3 for Turkey Point. Enclosures 6 and 7 provide marked up and retyped versions of Sections W.1 and W.2 and Table W-1 of Attachment W that reflect the changes to insights from the baseline fire PRA (acceptance documented in Enclosure 3 to Reference 6.1) associated with replacing the reliance on the Flowserve RCP Seal Topical Report with risk calculations employing the guidance in WCAP-16175-P-A. The risk results presented in the revised Attachment W accompanying this amendment request represent conservative estimates of the overall core damage frequency (CDF) and large early release frequency (LERF). Due to the small change in calculated risk, the information presented in Tables W-2 through W-7 of the original NFPA 805 LAR and supplements were not updated in full. Lastly, Enclosures 8 and 9 provide marked-up and retyped pages of the RFOLs, respectively.

## 2.2 Attachment M Changes

The Turkey Point RFOL Paragraph 3.D, "Transition License Conditions," Item 3, for each Unit is proposed for revision as follows:

The licensee shall implement the items listed in Enclosure ~~54~~, Attachment S, Table S-3, "Implementation Items," of FPL letter ~~L-2014-303, dated 11/05/2014,~~ **L-2018-219, dated 12/3/2018,** with the exception of items 12, 18, ~~and 19 and 22~~, 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. ~~Item 22 will be completed within 6 months of the NRC approval of the Flowserve RCP Seal Topical Report.~~

The modification of the Transition License Conditions in Turkey Point RFOL Paragraph 3.D necessitates further changes in Paragraph 3.D, "Fire Protection", as follows:

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; February 18, 2015; and October 24, and December 3, 2018), and as approved in the safety evaluations dated May 28, 2015 **and [Safety Evaluation Date]**. 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.

### 2.3 Attachment S Changes

FPL requests one change to Attachment S, Table S-3. Specifically, FPL is requesting the deletion of Implementation Item 22 from Table S-3. The deletion of this implementation item is discussed in detail in Section 3.1 of this enclosure. The discussion includes a description of the proposed change, the basis for the change, the risk impacts and the preservation of defense-in-depth and safety margins.

Several modifications in Attachment S, Table S-2 have been completed since Table S-2 was last submitted in Reference 6.3. However, the scope of changes to Attachment S submitted in this document is intentionally limited only to the deletion of the Table S-3 Implementation Item 22. Table S-2 was not updated to reflect modifications that have already been installed and could be transferred to Table S-1.

### 2.4 Attachment W Changes

FPL proposes to update Sections W.1 and W.2 of Attachment W, Fire PRA Insights. The Turkey Point fire PRA model was updated to modify human error probabilities associated with failure to trip the RCPs. These updates reflect the reduced time available to trip the pumps following loss of seal cooling in accordance with the timing limits documented in WCAP-16175-P-A (i.e., 20 minutes versus 60 minutes assumed in the Flowserve RCP Seal model). The probability of seal failure of the RCPs has also been adjusted to match those specified in WCAP-16175-P-A.

The impact of the modified human error probabilities discussed above is only a small change in calculated risk. Consequently, the results presented in the revised Attachment W (Sections W.1 and W.2) continue to represent conservative estimates of the overall CDF/LERF. As a result, it was not necessary to update the information presented in Tables W-2 through W-7 of the original NFWA 805 LAR and supplements (References 6.6 and 6.7). A detailed discussion of the risk contributions, including Unit specific differences and a more realistic evaluation resulting from removal of two overly-conservative screening values, is provided in the proposed changes to Attachment W [see Enclosure 6 (mark-up) and Enclosure 7 (clean copy)].

## 2.5 Changes to Defense-in-Depth and Safety Margin

Results of the defense-in-depth (DID) analyses and safety margin assessments were reviewed for any changes. For scenarios involving a complete loss of RCP seal cooling due to a fire, the previously identified DID actions were verified sufficient and are being retained. No additional DID actions were determined necessary. Therefore, no changes to DID and Safety Margin were identified.

## 2.6 Attachment C Changes

The Nuclear Safety Capability Analysis (NSCA) was reviewed for any changes in compliance strategies or variations from deterministic requirements (VFDRs). In the event of a complete loss of RCP seal cooling due to a fire, the existing compliance strategies were verified to remain valid. No new compliance strategies or VFDRs were determined necessary. Therefore, no changes are required to Attachment C.

## 2.7 Attachment G Changes

The NSCA was reviewed for any changes in recovery actions and activities occurring at the primary control station(s) associated with compliance strategies. In the event of a complete loss of RCP seal cooling due to a fire, the previously identified recovery actions for DID were verified sufficient and are being retained. These DID recovery actions do not have specific time requirements that require updating. No new recovery actions for DID or for risk were determined necessary. Therefore, no changes are required to Attachment G.

# 3.0 **TECHNICAL EVALUATION**

The proposed change removes the Flowserve RCP Seal Topical Report review requirement from the NFPA 805 transition license condition and removes Implementation Item 22 from Attachment S, Table S-3.

## 3.1 Proposed Change

The PRA treatment for RCP seal leakage will be revised to use the guidance from the NRC approved WCAP-16175-P-A instead of the guidance from the Flowserve RCP Seal Topical Report. Consequently, the fire PRA requires updates to selected data. Specifically, the Human Error Probability (HEP) values associated with reduced time to trip the RCPs on loss of seal cooling are changed as discussed below. The new time to trip the RCPs following a loss of seal cooling will be established as 20 minutes from WCAP-16175-P-A versus 60 minutes as assumed in the Flowserve RCP Seal Topical Report. The RCP seal failure probabilities in the PRA model were adjusted to be consistent with those presented in WCAP-16175-P-A for Flowserve RCP seals.

### 3.2 Basis for Change

The change to the Transition License Condition 3 includes the deletion of Table S-3, Implementation Item 22. This eliminates reliance on the Flowserve RCP Seal Topical Report. NRC approval of the Flowserve RCP Seal Topical Report is a precursor for the Table S-3 implementation item. The Flowserve RCP Seal Topical Report has not been submitted to the NRC. Removal of the Flowserve topical report license condition will allow Turkey Point to fully implement the requirements of the NFPA 805 license amendment and remain within its licensing basis for future RCP seal replacements without reliance on the Flowserve topical report.

The Flowserve RCP Seal Topical Report reliance will be replaced with the NRC approved industry consensus guidance provided in WCAP-16175-P-A. This results in the introduction of additional conservatism in the Turkey Point PRA. The time available to trip the RCPs following a loss of seal cooling is 20 minutes, whereas the time available assumed in the Flowserve RCP Seal Topical Report is 60 minutes. Assuming a shorter time for operators to recognize the need and trip the RCPs results in increases in the failure probability, which in turn increases the calculated CDF and LERF values. Additionally, the RCP seal failure probabilities were adjusted to be consistent with those provided in WCAP-16175-P-A.

The application of WCAP-16175-P-A results in marginal albeit "more than minimal" increases in the calculated CDF and LERF values and thereby require prior NRC approval, in addition to the proposed Transition License Condition 3 changes.

The risk impact, defense-in-depth and safety margin, and effect on the NSCA, VFDRs and RAs are discussed below. Additionally, the accepted PRA approach (use of WCAP-16175-P-A) and the applicability of the WCAP approach to Turkey Point is discussed in the sections below.

### 3.3 Risk Impact Discussion

The change from the guidance in the Flowserve RCP Seal Topical Report to WCAP-16175-P-A does not change the Turkey Point PRA model logic; only changes to selected model inputs are made. The Turkey Point PRA uses the same RCP seal leakage model. However several HEPs and RCP seal failure probabilities that are inputs to the model are changed to remove credit for the 4<sup>th</sup> RCP seal stage and apply WCAP-16175-P-A values to the other RCP seal stages. These HEPs are increased based on the reduced time credited to trip the RCPs, and the RCP seal failure probabilities are increased to be consistent with those provided in WCAP-16175-P-A.

The baseline fire PRA model (described in Section 2.1, above) was updated to reduce the available time for operators to trip the RCPs upon loss of seal cooling. As a result of the decrease in available time from the 60 minutes assumed in the Flowserve Topical Report to 20 minutes as specified in WCAP-16175-P-A, as



well as changes to the RCP seal failure probabilities presented in the WCAP, the calculated CDF and LERF values increased by a small amount.

The total change in risk is calculated in terms of CDF and LERF. Section W.1 of Attachment W presents two sets of risk results. The first set applies the data values associated with the use of the more conservative WCAP-16175-P-A assumptions concerning the RCP seals and related operator actions to the baseline fire PRA models. The second set of results further modifies the baseline PRA models to correct an identified over conservatism in several latent human error events that are unrelated to the RCP seal performance.

The first set of risk results shows that the increase in risk associated with the decreased operator action time and modification of the RCP seal failure probabilities due to transitioning from the Flowserve topical report to the WCAP-16175-P-A values is small.

The additional application of the corrections to the latent human error values yields the second set of risk results, which shows calculated CDF and LERF impacts that are reduced. The overall calculated CDF and LERF values (which include both sets of inputs) are comparable to the baseline CDF and LERF results reported in Attachment W of the original NFPA 805 LAR (Reference 6.7).

With respect to the risk change due to the NFPA 805 transition, Section W.2 of Attachment W provides the updated delta-CDF and delta-LERF results. The updated delta-CDF/LERF results, which include the risk of recovery actions, the revised RCP seal treatment, the correction of latent human error values and credit for risk reduction modifications, show a net risk decrease associated with the transition to NFPA 805.

The updated Attachment W demonstrates that the total delta risk values do not exceed the guidelines of RG 1.174 (Reference 6.8). This change in risk is comparable to that described in the original NFPA 805 LAR.

Additional discussion is provided in Enclosures 6 and 7 for Attachment W.

### 3.4 Defense-in-Depth and Safety Margin Discussion

A review of the defense-in-depth (DID) and safety margin evaluations associated with the original NFPA 805 License Amendment Request (Reference 6.6) have been completed based on the proposed application of the guidance from WCAP-16175-P-A instead of the guidance from the Flowserve topical report in the fire PRA model.

The update to the fire PRA does not impact the ability to prevent fires from starting, nor does it impact the ability to rapidly detect, control, and promptly extinguish fires that do occur. The only aspect of the DID approach that is altered is the timing associated with actions to stop RCPs to mitigate seal damage. As described in the Risk Impact Discussion above, the updated fire PRA indicates a small change in risk. However, failure to stop RCPs in total loss of RCP seal

cooling scenarios is still modeled in the fire PRA and the results remain acceptable.

Consistent with the use of fire risk evaluations and change evaluations for the NFPA 805 performance-based approach (Reference 6.13), implementation of the following guidelines ensures the bases for maintaining safety margin:

- The risk-informed, performance-based processes utilized are based upon NFPA 805, 2001 Edition, endorsed by the NRC in 10 CFR 50.48(c).
- The fire risk evaluation process is in accordance with NEI 04-02, Revision 2 (Reference 6.11), which is endorsed by the NRC in Regulatory Guide 1.205, Revision 1 (Reference 6.12).
- The fire PRA is developed with guidance from NUREG/CR-6850 (Reference 6.14), which was developed jointly between the NRC and the Electric Power Research Institute (EPRI).
- The baseline fire PRA (and the internal events PRA upon which it is based) have undergone formal industry peer reviews conducted by a diverse group of PRA practitioners from other PWR plants and industry.
- Fire protection systems and features determined to be required by NFPA 805 Chapter 4 have been confirmed to meet the requirements of NFPA 805 Chapter 3 and their associated referenced codes and listings or provided with acceptable alternatives using processes accepted for use by the NRC (e.g., FAQs).

In consideration of the discussions above, it is concluded that using the guidance in WCAP-16175-P-A instead of the guidance from the Flowserve topical report in the fire PRA model has no impact on any of the DID echelons relative to fire protection described by NFPA 805 and that adequate safety margin continues to be maintained.

### 3.5 Summary of Accepted PRA Approach Being Used

The RCP seal leakage model of WCAP-16175-P-A has been reviewed and approved by NRR staff (Reference 6.4). Additionally, the PRA approach used in the WCAP has been referenced in approved NFPA 805 amendments, including those of a Westinghouse design (References 6.9 and 6.10), and has been evaluated for use in the Turkey Point configuration.

There are no changes to any of the methods used in the fire PRA model as a result of using the WCAP-16175-P-A guidance related to the time limit to trip the RCPs on a loss of seal cooling and the changes in seal failure probabilities. There were no changes in event tree or fault tree models, meaning that no changes in any accident sequence modeling occurred. The PRA model's basic events pertaining to probability of RCP seal failure upon loss of seal cooling were adjusted to be consistent with WCAP-16175-P-A values. The reduced time available to trip the RCPs also resulted in increased human error probabilities

being calculated for individual basic events associated with failures to trip the RCPs. These probability changes were also reflected in the human error dependency analysis to ensure that the increased failure probabilities were considered in the dependent failure combinations. The methods used to calculate the increased HEPs remain unchanged. There were no changes made to the PRA model quantification methods.

### 3.6 Applicability of Accepted PRA Approach

The WCAP-16175-P-A RCP seal leakage PRA model has been evaluated for use in the Turkey Point configuration. WCAP-16175-P-A includes a three-stage RCP seal model and a four-stage RCP seal model, neither of which has the Abeyance Seal. Turkey Point installed the three-stage Flowserve RCP seal with the Abeyance Seal for Unit 3 and Unit 4 during the Fall 2015 and Spring 2016 refueling outages, respectively. The modifications correspond to Item 33 on Table S-2 of Attachment S (Reference 6.3). Since WCAP-16175-P-A does not include an Abeyance Seal model, this feature was conservatively not credited in the Turkey Point fire PRA model.

As described in Section 4 of the Safety Evaluation for WCAP-16175-P-A, there are three issues that must be addressed for non-Combustion Engineering (CE) plants that wish to apply the failure models for Flowserve RCP seals to the site specific PRA models. These issues include:

- Justify that failure modes observed during early operation of Flowserve RCP seals on CE plants are appropriately considered in the PRA models.
- Justify that stable RCP seal operation has been observed before applying the RCP seal model to the PRA.
- Justify that the plant and operator responses included in plant procedures reflect the conditions and timing assumed in the WCAP.

These concerns are addressed as follows:

- The Flowserve N-Seals have proven to be reliable in RCP installations throughout the industry since the 1980s. Since 2016, Turkey Point has operated with Flowserve RCP seals and has maintained communication with the seal vendor and industry groups regarding the seal design, failure mechanisms, maintenance, operational controls, and industry operating experience. These considerations, along with any differences between the Turkey Point RCP seals and the seal design discussed in WCAP 16175-P-A, were evaluated and judged not to affect the seal probability model. Thereby, the Turkey Point RCP seal design is appropriate for application of the 3-stage seal model evaluated in WCAP 16175-P-A.
- Operation of the Flowserve RCP seals since 2016 has yielded sufficient evidence of stable operation to justify application of the WCAP 16175-P-A seal model to the Turkey Point PRA. During operation with new Flowserve RCP seals, performance parameters including pressure distribution between

stages, Controlled Bleed Off (CBO) flow, and outlet temperature have remained within expected ranges. In cases where seals have experienced a degraded or failed stage, performance parameters have been within the vendor's pre-defined ranges for operating limits.

- Plant procedures for installation and operation of the Flowserve RCP seals reflect industry knowledge and operating experience. Operating procedures and operator training will be reviewed for consistency with the conditions and timing evaluated in WCAP-16175-P-A, and will be revised as necessary to support implementation of this license amendment.

Therefore, FPL concludes the approach is acceptable for use in the Turkey Point configuration.

### 3.7 Summary of Changes to NSCA and Associated Attachments C and G

The Nuclear Safety Capability Analysis (NSCA) was reviewed for any changes in compliance strategies or recovery actions. In the event of a complete loss of RCP seal cooling due to a fire in certain fire areas, the existing compliance strategies remain valid and the previously identified recovery actions for DID are being retained. No new compliance strategies or recovery actions were identified. Therefore, no changes are required to Attachments C or G.

### 3.8 Justification for Creation or Deletion of VFDRs and Recovery Actions

The NSCA was reviewed for any changes in VFDRs and compliance strategies (including Recovery Actions and activities occurring at the primary control station(s)). As described above, in the event of a complete loss of RCP seal cooling due to a fire in certain fire areas, the previously identified recovery actions for DID are being retained. These DID recovery actions do not have specific time requirements that require updating. No new VFDRs or recovery actions were identified. Therefore, no changes are required to the lists of VFDRs or Recovery Actions.

## 4.0 REGULATORY EVALUATION

### 4.1 Applicable Regulatory Requirements/Criteria

- 10 CFR 50.48(a) states, "Each holder of an operating license issued under this part or a combined license issued under part 52 of this chapter must have a fire protection plan that satisfies Criterion 3 of appendix A to this part." The plan must also satisfy specific requirements in that section.
- 10 CFR 50.48(c)(3)(ii) states, "The licensee shall complete its implementation of the methodology in Chapter 2 of NPPA 805 (including all required evaluations and analyses), and upon completion, modify its fire protection plan required by paragraph (a) of this section to reflect the

licensee's decision to comply with NFPA 805, before changing its fire protection program or the nuclear power plant as permitted by NFPA 805.”

- General Design Criteria (GDC) 3, Fire Protection, of Appendix A to 10 CFR 50 states, “Structures, systems, and components important to safety shall be designed and located to minimize, consistent with other safety requirements, the probability and effect of fires and explosions. Noncombustible and heat resistant materials shall be used wherever practical throughout the unit, particularly in locations such as the containment and control room. Fire detection and fighting systems of appropriate capacity and capability shall be provided and designed to minimize the adverse effects of fires on structures, systems, and components important to safety. Firefighting systems shall be designed to assure that their rupture or inadvertent operation does not significantly impair the safety capability of these structures, systems, and components.”
- Regulatory Guide 1.205 provides guidance for licensees to use in complying with the requirements of 10 CFR 50.48(c) for risk-informed performance-based fire protection programs.

The proposed license amendment complies with the requirements of 10 CFR 50.48(a) and 10 CFR 50.48(c)(3)(ii); and does not alter the manner in which Turkey Point will be operated and maintained consistent with GDC 3. All applicable regulatory requirements will continue to be satisfied as a result of the proposed change.

#### 4.2 Precedent

The proposed license amendment removes reliance on the Flowserve RCP Seal Topical Report for PRA treatment of RCP seal leakage and proposes use of the seal leakage model in WCAP-16175-P-A (Reference 6.4). In Reference 6.10, the NRC approved the use of the WCAP-16175-P-A seal model, which is specific to Combustion Engineering (CE) plants, for VC Summer Nuclear Station, Unit 1. The cited precedent is relevant to this amendment request because VC Summer, Unit 1, is also a Westinghouse plant transitioning to NFPA 805 and uses a RCP seal arrangement similar to Turkey Point. Similar to VC Summer, FPL evaluated the applicability of the RCP seal leakage model addressed in WCAP-16175-P-A and concluded that it is appropriate for use in the Turkey Point PRA.

#### 4.3 No Significant Hazards Consideration

The proposed license amendment eliminates the NFPA 805 Transition License Condition that is associated with the Flowserve Reactor Coolant Pump (RCP) Seal Topical Report. As required by 10 CFR 50.91(a), FPL has evaluated the proposed change using the criteria in 10 CFR 50.92 and has determined that the proposed change does not involve a significant hazards consideration. An analysis of the issue of no significant hazards consideration is presented below:

- (1) Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change removes the Flowserve RCP Seal Topical Report Implementation Item 22 from Table S-3 and from the NFPA 805 Transition License Condition. This change revises the Probabilistic Risk Assessment (PRA) credit for RCP seals by using the guidance from WCAP-16175-P-A instead of the guidance from the Flowserve topical report. The WCAP-16175-P-A guidance reduced the time available to trip the RCPs in the event of a complete loss of RCP seal cooling and resulted in increased human error probabilities associated with failures to trip the RCPs within the allowed time. In addition, WCAP-16175-P-A guidance increased the RCP seal failure probabilities. The proposed change has been reviewed using the fire PRA model that was approved as part of Turkey Point's transition to NFPA 805. The results, which showed a small change in plant risk, were found to be acceptable. Fire protection defense-in-depth and adequate safety margins are maintained with the changes proposed in this LAR.

As such, the proposed change cannot be an initiator of any previously evaluated accident, increase its likelihood or increase the likelihood of a malfunction of equipment required by NFPA 805 or supported equipment. Other than a reduced time available to trip the RCPs (in the event of a complete loss of RCP seal cooling) and the use of revised RCP seal failure probabilities, the proposed change to the manner in which the PRA credits RCP seals will not affect how the plants are designed or operated. The plants will continue to operate within the parameters assumed in applicable accident analyses. Hence no impact on the consequences of any previously evaluated accident will result from the proposed change.

Therefore, facility operation in accordance with the proposed changes would not involve a significant increase in the probability or consequences of an accident previously evaluated.

- (2) Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed change removes the Flowserve RCP Seal Topical Report Implementation Item 22 from Table S-3 and from the NFPA 805 Transition License Condition. This change revises the PRA credit for RCP seals by using the guidance from WCAP-16175-P-A instead of the guidance from the Flowserve topical report. The proposed change has been reviewed in the fire PRA model that was approved as part of Turkey Point's transition to NFPA 805 and the results were found to be acceptable. Fire protection defense-in-depth and adequate safety margins are maintained with the changes proposed in this LAR.

Other than a reduced time available to trip the RCPs (in the event of a complete loss of RCP seal cooling) and the use of revised RCP seal failure probabilities as described above, the proposed changes do not modify the manner in which the plants are designed or operated and thereby cannot introduce new failure modes, impact existing plant equipment in a manner not previously evaluated or initiate a new type of malfunction or accident. The proposed change will result in the revision of certain PRA probability values and as such, cannot adversely affect the ability of the plants to perform as originally designed, including their capability to withstand a worst case single failure.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

- (3) Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No

The proposed change removes the Flowserve RCP Seal Topical Report Implementation Item 22 from Table S-3 and from the NFPA 805 Transition License Condition. This change revises the PRA credit for RCP seals by using the guidance from WCAP-16175-P-A instead of the guidance from the Flowserve topical report. The proposed change has been reviewed in the fire PRA model that was approved as part of Turkey Point's transition to NFPA 805 and the results were found to be acceptable. Fire protection defense-in-depth and adequate safety margins are maintained with the changes proposed in this LAR.

The proposed change does not modify any setpoints for which protective actions associated with accident detection or mitigation are initiated. Other than a reduced time available to trip the RCPs (in the event of a complete loss of RCP seal cooling) and the use of revised RCP seal failure probabilities as described above, the proposed change does not affect the design of plant equipment nor the manner in which the plant is operated. The proposed change cannot adversely impact any Turkey Point safety limits or limiting safety settings.

Therefore, operation of the facility in accordance with the proposed change will not involve a significant reduction in the margin of safety.

Based upon the above analysis, FPL concludes that the proposed license amendment does not involve a significant hazards consideration, under the standards set forth in 10 CFR 50.92, "Issuance of Amendment," and accordingly, a finding of "no significant hazards consideration" is justified.

#### 4.4 Conclusion

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be

conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

## **5.0 ENVIRONMENTAL CONSIDERATION**

The proposed amendment modifies the RCP seal leakage inputs to the fire PRA model and eliminates a license condition. Therefore, the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## **6.0 REFERENCES**

- 6.1. NRC letter to FPL, "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)," dated May 28, 2015 (ADAMS Accession No. ML15061A237)
- 6.2. FPL letter L-2015-045 to NRC, "Turkey Point Nuclear Generating Units 3 and 4, Docket Nos. 50-250 and 50-251, Response to Request for Additional Information Regarding License Amendment Request No. 216, Transition to 10 CFR 50.48(c) - NFPA 805, Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition)," dated February 18, 2015 (ADAMS Accession No. ML15069A158)
- 6.3. FPL letter L-2014-303 to NRC, "Turkey Point Nuclear Generating Units 3 and 4, Docket Nos. 50-250 and 50-251, Response to Request for Additional Information Regarding License Amendment Request No. 216, Transition to 10 CFR 50.48(c) - NFPA 805, Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition)," dated November 5, 2014 (ADAMS Accession No. ML14336A634)
- 6.4. NRC to Westinghouse Owners Group, "Final Safety Evaluation for Pressurized Water Reactor Owners Group (PWROG) Topical Report WCAP-16175-P-A, Rev. 0, (CE NPSD-1199, Revision 1) "Model for Failure of RCP Seals Given Loss of Seal Cooling in CE NSSS Plants," dated February 12, 2007, (ADAMS Accession No. ML070240429)



- 6.5. NRC letter to NEI, "Recommended Content for License Amendment Requests that Seek Changes to License Conditions that were Established in Amendments to Adopt National Fire Protection Association Standard 805 but have yet to be Fully Implemented", dated March 2, 2016 (ADAMS Accession No. ML16015A416)
- 6.6. FPL letter L-2012-092 to NRC, "Turkey Point Nuclear Generating Units 3 and 4, Docket Nos. 50-250 and 50-251, License Amendment Request No. 216, Transition to 10 CFR 50.48(c) - NFPA 805, Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition)," dated June 28, 2012 (ADAMS Accession No. ML12191A048)
- 6.7. FPL letter L-2014-256 to NRC, "Turkey Point Nuclear Generating Units 3 and 4, Docket Nos. 50-250 and 50-251, Response to Request for Additional Information Regarding License Amendment Request No. 216, Transition to 10 CFR 50.48(c) - NFPA 805, Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition)," dated September 12, 2014 (ADAMS Accession No. ML14279A093)
- 6.8. Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-specific Changes to the Licensing Basis," Revision 3, January 2018
- 6.9. South Carolina Electric & Gas Company (SCE&G) letter to U.S. Nuclear Regulatory Commission, "Virgil C. Summer Nuclear Station (VCSNS) Unit 1, Docket No. 50-395, Operating License No. NPF-12, License Amendment Request LAR-06-00055, License Amendment Request to Adopt NFPA 805, Response to Request for Additional Information," dated August 14, 2014 (ADAMS Accession No. ML14227A737)
- 6.10. NRC letter to SCE&G, "Virgil C. Summer Nuclear Station Unit 1, Issuance of Amendment Regarding Transition to a Risk-Informed Performance-Based Fire Protection Program in Accordance with Title 10 CFR 50.48(c), (TAC No. ME7586)," dated February 11, 2015 (ADAMS Accession No. ML14287A289)
- 6.11. NEI 04-02, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10 CFR 50.48(c)," Revision 2, April 2008 (ADAMS Accession No. ML081130188)
- 6.12. Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants," Revision 1, December 2009 (ADAMS Accession No. ML092730314)
- 6.13. NFPA Standard 805, "Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants, 2001 Edition" [NFPA 805], January 13, 2001

- 6.14. NUREG/CR-6850, "EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities Volume 2: Detailed Methodology," Final Report, EPRI 1011989, September 2005

**Enclosure 2 to L-2018-219**

**License Amendment Request No. 265**

**Florida Power and Light Company  
Turkey Point Nuclear Generating Station Units 3 and 4  
Revise NFPA 805 License Condition for RCP Seals**

**Updated LAR Attachment M, License Condition Changes - Markup  
Copy**

Replace the current FPL Turkey Point Nuclear Plant Unit 3 and Unit 4 fire protection License Conditions 3.D with the standard license condition based upon Regulatory Position 3.1 of RG 1.205.

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Fire Protection Program

Florida Power and Light 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; **and October 24 and December 3, 2018**) and as approved in the safety evaluations dated May 28, 2015 **and [SE date]**. 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

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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 ~~4~~5, Attachment S, Table S-3, “Implementation Items,” of FPL letter ~~L-2014-303~~ L-2018-219, dated ~~11/05/2014~~ 12/3/2018, with the exception of items 12, 18, ~~and~~ and 19, ~~and 22~~, 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. ~~Item 22 will be completed within 6 months of the NRC approval of the Flowserve RCP Seal Topical Report.~~

**Enclosure 3 to L-2018-219**

**License Amendment Request No. 265**

**Florida Power and Light Company  
Turkey Point Nuclear Generating Station Units 3 and 4  
Revise NFPA 805 License Condition for RCP Seals**

**Updated LAR Attachment M, License Condition Changes  
- Clean Copy**

Replace the current FPL Turkey Point Nuclear Plant Unit 3 and Unit 4 fire protection License Conditions 3.D with the standard license condition based upon Regulatory Position 3.1 of RG 1.205.

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Fire Protection Program

Florida Power and Light 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; February 18, 2015; and October 24 and December 3, 2018) and as approved in the safety evaluations dated May 28, 2015 and [SE date]. 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

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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.

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**Enclosure 8 to L-2018-219**

**License Amendment Request No. 265**

**Florida Power and Light Company  
Turkey Point Nuclear Generating Station Units 3 and 4  
Revise NFPA 805 License Condition for RCP Seals**

**Operating Licenses Pages – Markups  
Renewed License No. DPR-31  
Renewed License No. DPR-41**

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 request~~s~~ 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; and October 24 and December 3, 2018), and as approved in the safety evaluation~~s~~ dated May 28, 2015 and [SE date]. 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.

### 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 November 5, 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 ~~45~~, Attachment S, Table S-3, "Implementation Items," of FPL letter ~~L-2014-303~~~~L-2018-219~~, dated ~~11/05/2014~~~~12/3/2018~~, with the exception of items 12, 18, ~~and~~ 19, ~~and 22~~, 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. ~~Item 22 will be completed within 6 months of the NRC approval of the Flowserve RGP Seal Topical Report.~~
- 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.

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; and October 24 and December 3, 2018), and as approved in the safety evaluation s dated May 28, 2015 and [SE date]. 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.

### 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 November 5, 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 ~~15~~, Attachment S, Table S-3, "Implementation Items," of FPL letter ~~L-2014-303~~ L-2018-219, dated ~~11/05/2014~~ 12/3/2018, with the exception of items 12, 18, ~~and~~ 19, ~~and 22~~, 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. ~~Item 22 will be completed within 6 months of the NRC approval of the Flowserve RCP Seal Topical Report.~~

- 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.

**Enclosure 9 to L-2018-219**

**License Amendment Request No. 265**

**Florida Power and Light Company  
Turkey Point Nuclear Generating Station Units 3 and 4  
Revise NFPA 805 License Condition for RCP Seals**

**Operating Licenses Pages – Clean Copies  
Renewed License No. DPR-31  
Renewed License No. DPR-41**



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; February 18, 2015; and October 24 and December 3, 2018), and as approved in the safety evaluations dated May 28, 2015 and [SE date]. 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.

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 November 5, 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 date 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.

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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; February 18, 2015; and October 24 and December 3, 2018), and as approved in the safety evaluations dated May 28, 2015 and [SE date]. 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.

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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.

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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.