



L-2018-056  
10 CFR 50.90  
February 16, 2018

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

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

Response to Request for Additional Information Regarding License Amendment  
Request 256, One-Time Extension of 3A Containment Spray (CS) Pump  
Completion Time

References:

1. Florida Power & Light Company letter L-2017-213, License Amendment Request 256, One-Time Extension of 3A Containment Spray (CS) Pump Completion Time, December 18, 2017 (ADAMS Accession No. ML17353A492)
2. NRR E-Mail Capture, Request for Additional Information - Turkey Point 3 LAR 256 (EPID L-2017-0423), February 5, 2018

In Reference 1, Florida Power & Light Company (FPL) submitted license amendment request (LAR) 256 for Turkey Point Units 3 and 4. The proposed license amendment modifies the Turkey Point Technical Specifications (TS) by extending on a one-time basis, the Completion Time for an inoperable 3A Containment Spray (CS) Pump from 72 hours to 14 days. The one-time license amendment is necessary to perform a planned modification of the pump while at-power.

In Reference 2, the NRC requested additional information necessary to complete its review.

The enclosure to this letter provides FPL's response to the request for additional information (RAI). In addition, as discussed in the enclosure, FPL is modifying the proposed footnote to TS 3.6.2.1, *Containment Spray System*, to include the compensatory actions specified in Reference 1, as requested by the NRC staff during a February 9, 2018 discussion. Attachment 1 to the enclosure provides the existing TS page marked up to show the proposed change. The TS marked up page supersedes the corresponding page provided in Reference 1. No change is proposed to the current TS Bases as a result of this RAI response.

The supplements included in this response provide additional information that clarifies the application, do not expand the scope of the application as originally noticed, and should not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register*.

The Turkey Point Onsite Review Group (ORG) has reviewed the TS change associated with this RAI response. In accordance with 10 CFR 50.91(b)(1), a copy of the proposed TS changes associated with this RAI response is being forwarded to the designee for the State of Florida.

This letter contains no new or revised regulatory commitments.

Should you have any questions regarding this submission, 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 the February 16, 2018.

Sincerely,



Robert Coffey  
Regional Vice President - Southern Region  
Turkey Point Nuclear Plant

Enclosure:  
Attachment

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

**Enclosure**

FPL Response to NRC Request for Additional Information (RAI) Regarding LAR 256,  
One-Time Extension of 3A Containment Spray (CS) Pump Completion Time

In an e-mail memorandum dated February 5, 2018 (Reference 1), the Probabilistic Risk Assessment Licensing Branch (APLA) of the NRC Office of Nuclear Reactor Regulation requested the additional information identified below regarding License Amendment Request (LAR) 256, One-Time Extension of 3A Containment Spray (CS) Pump Completion Time (Reference 2). FPL's response follows:

### **APLA RAI 01: PRA CAPABILITY AND INSIGHTS**

Section 2.3, "Evaluation for Risk Impact," of Regulatory Guide (RG) 1.177, Revision 1, *An Approach for Plant-Specific, Risk-Informed Decision-making: Technical Specifications*, provides a detailed approach for evaluating Technical Specification (TS) changes. In the three-tiered approach, Tier 1 discusses two aspects that need to be considered when assessing the impact of the TS change on core damage frequency (CDF), incremental conditional core damage probability (ICCDP), large early release frequency (LERF), and incremental conditional large early release probability (ICLERP). The two aspects included (1) the validity of the probabilistic risk assessment (PRA) and (2) the PRA insights and findings. To address the two aspects and confirm the validity of the risk estimates provided in Section 3.3.1.4 of your December 18, 2017, request, provide the following additional information:

- a. Confirm that the peer review history for the Internal Events (IE) and Internal Floods (IF) PRA models used to perform the risk evaluation in the licensing amendment request (LAR) dated December 18, 2017, are the same as those described in the risk-informed inservice inspection. LAR dated January 14 2016 (ADAMS Accession No. ML16033A355) and approved by the NRC staff in the safety evaluation dated October 26, 2017 (ADAMS Accession No. ML16293A778). If not, provide the current review history up to the December 18, 2017, LAR.
- b. The CS system generally supports long term containment overpressure protection and fission product removal to reduce release fractions. As such, failure of the CS system generally does not contribute to CDF and LERF. Section 3.3.1.1, "Results," of the December 18, 2017, LAR provides the total delta CDF and delta LERF results. The results indicate a very small increase in CDF and correspondingly a very small increase in LERF due to extending the completion time to 14 days for one CS train inoperable.
  1. Provide discussion of PRA insights that justify the very small increases for CDF and LERF as a result of the failure of one train of CS and,
  2. Identify any open IE and IF finding-level facts and observations (F&Os) that might affect the CDF and LERF estimates where the delta CDF and delta LERF values will no longer meet the RG 1.177 risk metrics. Specifically, steam generator tube rupture and interfacing system loss-of-coolant accident are two primary accident initiators which contribute to LERF and were identified in the risk-informed inservice inspection LAR as remaining open and unresolved. For any F&Os identified, provide a disposition that assesses any potential impact as it pertains to the request for a one time extension of the completion time for one inoperable train of CS.

### **FPL Response**

- a. The peer review history for the Internal Events (IE) and Internal Floods (IF) PRA models used to perform the risk evaluation in LAR 256 (Reference 2) is the same as that described in FPL's risk-informed in-service inspection relief request dated January 14, 2016 (Reference 3).
- b. The part b response is given below.
  1. The Containment Spray System (CSS) is included in the Turkey Point PRA model only as an EQ support system for the RHR suction valves (MOV-3-750 and MOV-3-751) and the containment sump level instrumentation. Since the CSS only affects these components, its impact on overall risk is minimal.
  2. The open IE and IF F&Os from the RI-ISI submittal were reviewed, and none are expected to have a significant effect on the risk impact of the one-time extension of the CSS train. The impact on LERF due to the resolution of the open findings related to ISLOCA (IE-C14-01, IE-C14-02, IE-C14-03, IE-C14-04, and IE-C14-05) has been quantitatively evaluated in the draft model update and found to be minimal. Further, the impact would only be to the baseline LERF, not to any LERF increase due to the one-time extension. Therefore, the delta CDF and delta LERF will meet the RG 1.177 risk metrics.

### **APLA RAI 02 - Tier 2: AVOIDANCE OF RISK-SIGNIFICANT PLANT CONFIGURATIONS**

RG 1.177, Revision 1, identifies a three-tiered approach for the licensee's evaluation of the risk associated with a proposed Completion Time (CT) TS change.

In its December 18, 2017, submittal, the licensee relies on its configuration risk management program (CRMP) without performing any evaluations (qualitative or quantitative) to identify potential risk-significant plant configurations for the proposed one-time CT extension. This reliance on the CRMP is more appropriate for the Tier 3 evaluation, which ensures that adequate programs and procedures are in place for identifying risk-significant plant configurations and taking appropriate actions to avoid such configurations.

Whereas the Tier 3 evaluation ensures the CRMP is adequate when maintenance is about to commence, the Tier 2 evaluation is meant to be an early evaluation to identify and preclude potentially high-risk plant configurations that could result if equipment, in addition to that associated with the proposed license amendment, are taken out of service simultaneously, or if other risk-significant operational factors, such as concurrent system or equipment testing, are also involved.

To distinguish between Tier 2 and Tier 3 reliance on the CRMP, and address Tier 2 in its entirety, identify for the subject one-time CT extension, any high-risk plant configurations that may occur and the compensatory measures the licensee is implementing to ensure these configurations do not occur during the onetime CT extension. Explain how the identification of any high-risk plant configurations was determined.

### **FPL Response**

The cutsets from the risk calculation of the impact of having the CS pump out of service were reviewed to determine any configurations that should be avoided and to identify Tier 2 compensatory measures. During the review, the typical failure events that occurred in the top cutsets, where the A-train of the CSS was failed, were the CSS B-train and Emergency Containment Cooler failures, all of which were addressed by the proposed compensatory measures of Section 3.2.1, Guarded and Protected Equipment, of LAR 256 (Reference 2) as indicated below:

For the duration of the proposed one-time 3A CS Pump Completion Time extension, the following plant equipment is clarified to be guarded in accordance with plant procedure OP-AA-102-1003, Guarded Equipment, as indicated below.

- 3B Containment Spray Pump and associated electrical breaker [Guarded]
- 3A, 3B and 3C Emergency Containment Coolers and associated electrical breakers [Guarded]
- 3A, 3B Emergency Diesel Generators [Guarded]
- Unit 3 Startup Transformer and associated onsite AC power distribution system [Guarded]

Also, the risk impact of the proposed one-time Completion Time extension is very low. Any other high-risk configurations will be essentially the same as when the CSS train is in-service, where the Maintenance Rule monitoring requirements of 10 CFR 50.65(a)(4) suffice.

The ICCDP and ICLERP associated with this one-time extension were very low, orders of magnitude below the RG 1.177 guidelines. Given this fact, the cutset review and the Section 3.2.1 compensatory measures that will be implemented, no additional compensatory measures were deemed necessary.

### **New Change to Proposed TS 3.6.2.1 Footnote**

Additionally, as requested by the NRC staff during a February 9, 2018 discussion, FPL is modifying the proposed footnote to TS 3.6.2.1, Containment Spray System, to include the compensatory actions specified in Section 3.2.1, Guarded and Protected Equipment, of LAR 256 (Reference 2) as indicated above. The compensatory actions are the additional guarded equipment and trains that must be in place prior to entering the proposed one-time completion time extension from 72-hours to 14 days. The addition of the compensatory actions to the

proposed TS 3.6.2.1 footnote provides assurance of their implementation and is thereby reasonable.

Attachment 1 to the enclosure provides the existing TS page marked up to show the proposed change. The TS marked up page supersedes the corresponding page provided in Reference 2. No change is proposed to the current TS Bases as a result of this RAI response.

**References:**

1. NRR E-Mail Capture, Request for Additional Information - Turkey Point 3 LAR 256 (EPID L-2017-0423), February 5, 2018
2. Florida Power & Light Company letter L-2017-100, License Amendment Request 256, One-Time Extension of 3A Containment Spray (CS) Pump Completion Time, December 18, 2017 (ADAMS Accession No. ML17353A492)
3. Florida Power & Light Company letter L-2016-006, Fifth Ten-Year Inservice Inspection (ISI) Interval Relief Request No. 4, January 14, 2016 (ADAMS Accession No. ML16033A355)

**ATTACHMENT 1**

**PROPOSED TECHNICAL SPECIFICATION PAGE (MARK UP)**

(1 page follows)

## CONTAINMENT SYSTEMS

### 3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

#### CONTAINMENT SPRAY SYSTEM

##### LIMITING CONDITION FOR OPERATION

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3.6.2.1 Two independent Containment Spray Systems shall be OPERABLE with each Spray System capable of taking suction from the RWST and manually transferring suction to the containment sump via the RHR System.

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

ACTION:

Add double asterik (\*\*)

- a. With one Containment Spray System inoperable restore the inoperable Spray System to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With two Containment Spray Systems inoperable restore at least one Spray System to OPERABLE status within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore both Spray Systems to OPERABLE status within 72 hours of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

##### SURVEILLANCE REQUIREMENTS

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4.6.2.1 Each Containment Spray System shall be demonstrated OPERABLE:

- a. In accordance with the Surveillance Frequency Control Program by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position\* and that power is available to flow path components that require power for operation;
- b. By verifying that on recirculation flow, each pump develops the indicated differential pressure, when tested pursuant to Specification 4.0.5:  
  
Containment Spray Pump  $\geq 241.6$  psid while aligned in recirculation mode.
- c. In accordance with the Surveillance Frequency Control Program by verifying containment spray locations susceptible to gas accumulation are sufficiently filled with water.

\*\* During Unit 3 Cycle 29 only, a one-time extension from 72 hours to 14 days is allowed to perform 3A Containment Spray Pump (3P214A) planned maintenance, provided the following compensatory measures are in place:

- 3B Containment Spray Pump and associated electrical breaker [Guarded]
- 3A, 3B and 3C Emergency Containment Coolers and associated electrical breakers [Guarded]
- 3A, 3B Emergency Diesel Generators [Guarded]
- Unit 3 Startup Transformer and associated onsite AC power distribution system [Guarded]