



October 4, 2017

L-2017-151

10 CFR 50.90

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

Re: Turkey Point Nuclear Plant, Units 3 and 4
Docket Nos. 50-250 and 50-251

Response to Request for Additional Information Regarding License Amendment Request 249: Elimination of Certain Technical Specification Reporting Requirements, Revised Action for Emergency Core Cooling System, and Changes to Administrative Technical Specifications

References:

1. Florida Power & Light Company letter L-2017-060, "License Amendment Request 249: Elimination of Certain Technical Specification Reporting Requirements, Revised Action for Emergency Core Cooling System, and Changes to Administrative Technical Specifications," April 9, 2017 (ML17101A637)
2. NRC E-mail "Request for Additional Information - Turkey Point 3 & 4 LAR-249 (CAC Nos. MF9601 & MF9602)," August 16, 2017 (ML17228A716)

In Reference 1, Florida Power & Light Company (FPL) submitted license amendment request (LAR) 249 for Turkey Point Units 3 and 4. The proposed amendment would revise the Technical Specifications (TS) to eliminate certain TS reporting requirements, revise an action for the Emergency Core Cooling System (ECCS), and make changes to certain administrative TS.

In Reference 2, the NRC staff requested additional information to support its review of the LAR. The Enclosure to this letter provides FPL's response to the request for additional information (RAI).

This RAI response does not alter the conclusions in Reference 1 that the changes do not involve a significant hazards consideration pursuant to 10 CFR 50.92, and there are no significant environmental impacts associated with the changes.

No new or revised commitments are included in this letter.

Should you have any questions regarding this submission, please contact Mr. Mitch Guth, Licensing Manager, at (305) 246-6698.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on October 4, 2017

Sincerely,

A handwritten signature in black ink, appearing to read 'T. Summers', with a long horizontal line extending to the right.

Thomas Summers
Regional Vice President - Southern Region
Florida Power & Light Company

Enclosure

cc: NRC Regional Administrator, Region II
NRC Senior Resident Inspector
NRC Project Manager
Ms. Cindy Becker, Florida Department of Health

Response to Request for Additional Information (RAI)

1. SRXB RAI 1 - TS 3.5.2 Regarding Isolation Valves 744A/B and 843A/B

Chapter 6.2 Figures in the updated final safety analysis report (UFSAR) for Turkey Point indicate that the residual heat removal (RHR) and safety injection (SI) cold-leg headers each contain two parallel flow paths with a motor-operated isolation valve in each flow path. Those four isolation valves (744A/B and 843A/B) would open on an SI actuation signal. While the proposed TS would add the RHR parallel injection flow paths and SI parallel injection flow paths to ACTION a of TS 3.5.2 limiting the outage time of the associated flow paths to 72 hours, the valves 744A/B and 843A/B are not added to TS 3.5.2, Surveillance Requirement (SR) 4.5.2.a, which specifies the requirements for applicable valves in the ECCS flow paths for determining if the ACTION requirements in ACTION a of TS 3.5.2 are met for a corresponding flow path.

Paragraph 50.36(c)(3) of Title 10 of the *Code of Federal Regulations* requires, in part, establishing SRs to assure that the Limiting Conditions for Operation (LCOs) will be met. Provide a justification for the acceptability of not including valves 744A/B and 843 A/B in TS SR 4.5.2.a.

FPL Response

The high head cold leg injection valves (843A/B) and the low head cold leg injection valves (744A/B) are normally closed and energized, motor-operated valves that automatically open upon receipt of a safety injection signal. Including these valves in Technical Specification (TS) surveillance requirement (SR) 4.5.2.a would be inappropriate because this SR requires that certain valves be in specified positions with power to the valve operators removed. Removing power from the high head and low head cold leg injection valves would render them incapable of performing their required function to automatically open on an actuation signal.

While SR 4.5.2.a is not appropriate for the high head and low head cold leg injection valves, other SRs in TS 3.5.2 verify operability of these valves. SR 4.5.2.b.2, which verifies that each valve (manual, power-operated, or automatic) in the emergency core cooling system (ECCS) flow path that is not locked, sealed, or otherwise secured in position, is in its correct position, includes the high head and low head cold leg injection valves. The frequency of performing this SR is specified in the Surveillance Frequency Control Program (SFCP) as 31 days. In addition, SR 4.5.2.f.1 verifies that the high head and low head cold leg injection valves actuate to their correct position on a safety injection actuation test signal. This test is performed at a frequency of 36 months on a staggered test basis as specified in the SFCP. These SRs are equivalent to SR 3.5.2.2 and 3.5.2.5 in NUREG-1431, Standard TS for Westinghouse Plants. Therefore, TS 3.5.2 currently includes appropriate SRs for the ECCS cold leg injection valves consistent with 10 CFR 50.36(c)(3) to demonstrate the limiting condition for operation in TS 3.5.2 will be met.

2. SRXB RAI 2 - TS 3.5.2 Regarding RCS Hot-Leg leg Recirculation Flow Path

Chapter 6.2.2 of the UFSAR indicates that the RCS hot-leg injection piping configuration contains two parallel injection flow paths with a motor-operated isolation valve in each flow path. The RCS hot-leg injection is required to prevent boric acid precipitation on the fuel cladding from reducing core cooling following a loss-of-coolant accident (LOCA). Those two isolation valves (866A/B) would open during the RCS hot-leg injection mode, and they are included in TS 3.5.2, SR 4.5.2.a, which specifies the requirements for applicable valves to assure ECCS flow paths to be operable. The LCO and ACTION Requirements (AR) for the hot-leg parallel injection flow paths are not available in TS 3.5.2.

Criterion 3 in Paragraph 50.36(c)(2)(ii) of Title 10 of the *Code of Federal Regulations* requires, in part, a TS LCO for a structure, system, or component that is credited in the design basis transient and/or LOCA analysis. Provide a justification for the adequacy of not including the RCS hot-leg parallel injection flow paths in a TS LCO and AR.

FPL Response

The hot leg recirculation flow path via the SI pumps is provided for continuation of the recirculation phase. A RHR train supplies flow to the SI pumps suction. The SI pumps discharge to the hot leg injection header. Hot leg recirculation is required to prevent boric acid plate-out on the fuel cladding from reducing core cooling following a cold leg break.

To avoid the possibility of steam binding due to injection into the hot legs early in any LOCA transient when steam generators are still relatively hot, the 866 valves which control the flow paths to the hot legs are maintained closed by keeping the motor circuit breakers locked open at the motor control centers. This administrative control ensures that automatic or inadvertent manual actions do not result in hot leg injection. As such, manual action is required to energize the 866 valves and initiate hot leg injection.

The requirement in TS LCO 3.5.2.a for the SI pump discharge flow paths to be aligned to the RCS cold legs was incorporated on August 28, 1990 by License Amendments 137 and 132 for Units 3 and 4, respectively. This alignment is associated with the initial automatic actuation of SI and occurs without operator action on a SI signal.

License Amendments 137 and 132 replaced the former Turkey Point custom TS with TS based on Draft Revision 5 of NUREG-0452 (the original Westinghouse Standard Technical Specifications) within certain limitations. Those limitations were that the revised TS would not require hardware changes, would reflect the current plant design and analytical basis, and would consider operating hardship or reasonable additions. A TS LCO specific to the hot leg flow paths was not incorporated.

10 CFR 50.36(c)(2)(iii) states: "A licensee is not required to propose to modify technical specifications that are included in any license issued before August 18, 1995, to satisfy the criteria in paragraph (c)(2)(ii) of this section." 10 CFR 50.36(c)(2)(iii) applies to TS LCO 3.5.2.a because the specified alignment to the cold legs was established prior to August 18, 1995.

FPL adequately maintains the 866 valves functional as follows:

- The 866 valves are included in the Inservice Testing Program and are functionally tested when the units are in cold shutdown and the RCS is depressurized if the valves have not been tested within the previous 92 days.
- The 866 valves are verified to be closed with power removed in accordance with TS SR 4.5.2.a. They are also verified to be closed with power removed during the performance of TS SR 4.5.2.b.2.
- The 866 valves are included in the scope of the Maintenance Rule as required by 10 CFR 50.65(b)(1).

Based on the above, 10 CFR 50.36(c)(2)(iii) does not require FPL to propose a change to TS LCO 3.5.2.a. In addition, current FPL testing and maintenance processes ensure that the 866 valves are maintained to a high degree of availability.