From: Michael Mahoney
Sent: Monday, November 7, 2022 1:30 PM
To: Maher, William
Subject: Turkey Point Nuclear Generating Unit Nos. 3 and 4 - Request for Additional Information - ITS
Attachments: Request for Additional Information - Turkey Point ITS LAR.pdf

Dear Mr. Maher,

By letter dated September 22, 2021 (ML21265A370) as supplemented by letters dated January 19, 2022 (ML22019A067) and March 30, 2022 (ML22089A195), Florida Power & Light Company (the licensee) submitted a license amendment request (LAR) to revise the Turkey Point Nuclear Generating Unit Nos. 3 and 4 current Technical Specifications (CTS) to Improved Technical Specifications (ITS) consistent with Improved Standard Technical Specifications in NUREG 1431, "Standard Technical Specifications – Westinghouse Plants," Revision 5.

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing your submittal and has identified areas where additional information is needed to complete its review.

As discussed, response to the attached RAIs are requested no later than 30 business days from today's date.

The NRC staff considers that timely responses to RAIs help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. If circumstances result in the need to revise the requested response date, please contact me.

Once this email is added to ADAMS I will provide the accession number.

Thanks

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TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4

REQUEST FOR ADDITIONAL INFORMATION

IMPROVED TECHNICAL SPECIFICATIONS CONVERSION

DOCKET NO. 50-250 AND 50-251

By letter dated September 22, 2021 (ML21265A370) as supplemented by letters dated January 19, 2022 (ML22019A067) and March 30, 2022 (ML22089A195), Florida Power & Light Company (the licensee) submitted a license amendment request (LAR) to revise the Turkey Point Nuclear Generating Unit Nos. 3 and 4 current Technical Specifications (CTS) to Improved Technical Specifications (ITS) consistent with Improved Standard Technical Specifications in NUREG 1431, "Standard Technical Specifications – Westinghouse Plants," Revision 5.

To complete its review of the proposed LAR, the U.S. Nuclear Regulatory Commission staff requests the following additional information:

Regulatory Basis

Section (c) of 10 CFR 50.36, "*Technical specifications*," states the technical specifications (TS) will include, among other things, safety limits, limiting safety system settings, and limiting control settings.

10 CFR 50.36, paragraph (c)(1)(ii)(A) *Safety limits, limiting safety system settings, and limiting control settings,* states, in part, that,

> Limiting safety system settings for nuclear reactors are settings for automatic protective devices related to those variables having significant safety functions. Where a limiting safety system setting is specified for a variable on which a safety limit has been placed, the setting must be so chosen that automatic protective action will correct the abnormal situation before a safety limit is exceeded.
>
> Where a limiting safety system setting (LSSS) is specified for a variable on which a safety limit has been placed, the setting must be so chosen that automatic protective action will correct the abnormal situation before a safety limit is exceeded.
>
> If, during operation, it is determined that the automatic safety system does not function as required, the licensee shall take appropriate action, which may include shutting down the reactor.

Technical Specifications Task Force (TSTF) traveler TSTF-493, Revision 4 (April 23, 2010, with errata January 2011) was developed to provide a basis for licensees to address whether

instrument Function channels identified as having limiting safety system settings (LSSSs) were "functioning as required" during instrument channel calibration and functional testing surveillances. This traveler was developed in part in response to the staff's clarification of the requirements in 10 CFR 50.36(c) through issuance of Regulatory Issue Summary (RIS) 2006-17 "NRC Staff Position on the Requirements of 10 CFR 50.36, 'Technical Specifications,' Regarding Limiting Safety System Settings During Periodic Testing and Calibration of Instrument Channels." TSTF-493 describes how licensees may revise their plant-specific TS by explicitly specifying the current implicit testing requirements for applicable instrument Functions identified as having LSSSs, by establishing As-Found and As-Left Tolerance limits on the channel's trip or actuation setting meeting acceptance criteria as described in the RIS.

Requests for Additional Information (RAI)

The following questions are regarding proposed changes in Revision 1 of the Turkey Point ITS conversion LAR, volume 8 of enclosure 2 (ITS Section 3.3).

Background for RAI-1
The licensee proposes to apply TSTF-493, "Clarify Application of Setpoint Methodology for LSSS Function" Option A – "Addition of [surveillance] Notes 1 and 2 to the Agreed Upon Functions," as part of its request to revise its CTS to ITS based on NUREG-1431, Revision 5. The Standard Technical Specifications (STS) include Option A of TSTF-493.

Surveillance Note 1 of TSTF-493, Option A, discusses the application of an as-found tolerance (AFT). Surveillance Note 2 of TSTF-493, Option A, also discusses the application of a predetermined AFT band about the limiting trip setpoint (LTSP), the nominal trip setpoint (NTSP), or the actual as-left field setting of the surveillance (Channel Calibration and Channel Operational Test). This surveillance as-left field setting must be within a predetermined as-left tolerance (ALT) band. Additionally, on page 7 of the front matter of the TSTF-493 traveler it states, in part, "Implementation of [surveillance] Note 1 requires the licensee to calculate an as-found tolerance" (limit).

In addition, the TSTF-493 traveler includes a Model Application for Adoption of TSTF-493 Option A (ML100710442), which states, in part, "Additionally, to ensure proper use of the allowable value (AV), LTSP, and NTSP, the methodology for calculating the as-left and as-found tolerances must also be included in [the FSAR] [a document incorporated by reference in the FSAR] and listed in surveillance Note 2 as discussed in Section 3.1.2, below."

The NRC staff noted while reviewing Turkey Point Units 3 and 4's UFSAR, Section 7.2.2, "System Design," the subsection for Setpoint Methodology discusses WCAP-17070 (whose scope and NRC approval was limited to the instruments impacted by the 2012 extended power update (EPU) license amendment).

As part of an information exchange with the NRC staff related to the ITS conversion request for Turkey Point, the licensee stated in its response to NRC question number MEH003 on the

Certrec Portal that several protective functions use the methodology described in WCAP-12745, Rev. 0, 1990, and Rev. 1, 1996, as the instrument channel performance uncertainty/setpoint methodology of record. When the NRC staff reviewed the WCAP-12745 report, the staff found that the terms AFT and ALT, along with other terms clarifying the use and application of the setpoint and LSSS related terms in RIS 2006-17, are not described. It appears that the WCAP-12745 methodology states that the method used to determine whether the channel is functioning as required uses only the non-conservative direction of channel drift towards the AV, and not the two-sided comparison of the as-measured value against the bi-directional rack calibration accuracy term, as described in WCAP-17070. Further, it is not clear whether the magnitude of this error limit includes or does not include the same terms identified within the RIS or within the approved WCAP-17070.

The NRC staff needs information to understand how the licensee is implementing the proposed surveillance Notes 1 and 2 of TSTF-493, Option A for determining whether an instrument channel is functioning as required (as described in Option A of TSTF-493), since WCAP-12745 does not define these terms, (i.e., similar to how they have been established and described in WCAP-17070). If the licensee plans to use WCAP-12745 to identify how the channels will be determined to be functioning as required during a channel surveillance, the NRC staff expects that the licensee's setpoint methodology for establishing and maintaining LSSS functional limits will clearly define how the key terms of ALT and AFT are established and used as surveillance acceptance criteria for the instrument Functions having an associated LSSS. Meeting this expectation will enable use of Notes 1 and 2 to reach a determination of acceptability for the application of TSTF-493 Option A for those associated instrument Functions.

RAI-1
Given the NRC staff's information needs described above, the license is requested to provide the following information for the LSSS instrument Functions specified by ITS Subsections 3.3.1 and 3.3.2:

a. A revised channel performance uncertainty evaluation methodology for TS related instrument Functions that are not within the scope of WCAP-17070, clearly describing how the as-found tolerance (AFT), as-left tolerance (ALT), Nominal Trip Setpoint (NTSP, or NSP), Safety Analysis Limit (SAL), Channel Statistical Allowance (CSA), Margin, Total Allowance (TA) and allowable value (AV) are defined and how each term relates to other terms, and how they are to be used in relation to the surveillance Notes (b) and (c) proposed to be included in ITS Tables 3.3.1-1 and 3.3.2-1, that are consistent with the definitions used in TSTF-493 Option A, and with RIS 2006-17.

b. Summaries of channel performance uncertainty calculations for instruments not within the scope of WCAP-17070 demonstrating how the use of the terms in Item a. above still ensures that the total allowance (TA) includes a positive margin beyond the CSA but still within the SAL.

c. Based on information exchanged with the licensee, in some cases it appears that at least two setpoint methods have been applied to a single instrument. Explain why it is

acceptable to use two different setpoint methods for a single instrument (e.g., Power Range Neutron Flux – High setpoint and Low setpoint).

d. Description of information related to the updated channel performance uncertainty methodology provided by the licensee in above Item a that will be added into the appropriate section of the UFSAR, as was the case for the WCAP-17070 methodology. If the licensee does not plan to revise and resubmit the WCAP-12745 methodology topical report, then the UFSAR description should be sufficiently detailed to describe the technical relationships of how the AFT and ALT acceptance criterion described in the Tech Spec Table footnotes will be applied when using the specific values and terms that appear in WCAP-12745 where AFT and ALT do not appear. The UFSAR description should describe how the specific terms in WCAP-12745 are to be combined or derived to develop values for AFT and ALT that is consistent with the footnotes in the Tech Spec tables and the concepts within RIS 2006-17 and TSTF-493 Option A.

Background for RAI-2 and RAI-3

Since 1992 in Revision 0 of NUREG-1431, Table 3.3.1-1 and Table 3.3.2-1 have included a Reviewer's Note regarding the [Nominal] Trip Setpoint column, which states: "Unit specific implementations may contain only Allowable Value depending on Setpoint Study methodology used by the unit."

In NUREG-1431 Rev. 5, STS Bases pages B 3.3.1-3 and B 3.3.2-3 include the following statement:

> [Note: Alternatively, a Technical Specification format incorporating an Allowable Value only column may be proposed by a licensee. In this, case, the [NTSP] value and the methodologies used to calculate the as-found and as-left tolerances must be specified in [insert the name of a document controlled under 10 CFR 50.59 such as the Technical Requirements Manual or any document incorporated into the facility FSAR]. Changes to the actual plant trip setpoint or [NTSP] value would be controlled by 10 CFR 50.59 or administratively as appropriate, and adjusted per the setpoint methodology and applicable surveillance requirements.]

RAI-2

The licensee is requested to provide a technical explanation of how the "setpoint study" methodologies of record in WCAP-12745 Revisions 0 and 1, and WCAP-17070, Revision 1, justify omitting the Trip Setpoint column for the instrument Functions having LSSS values in ITS Table 3.3.1-1 and Table 3.3.2-1, while retaining the Allowable Value column in these tables. In addition, if the setpoint column is removed, and the existing methodologies are not applicable to all relocated setpoints, describe the programmatic controls that will be in place that would prevent those setpoints from being changed under licensee control via 10 CFR 50.59.

RAI-3

In ITS Subsections 3.3.4, 3.3.5, and 3.3.6, the licensee proposed to remove trip setpoint values from the current TS while retaining the current TS allowable values in the ITS. These changes are described in the removed detail discussions of change (designated as LA DOCs). Specifically, the changes and their justifications are in LA01 (ITS 3.3.4), LA02 (ITS 3.3.5), and LA02 (ITS 3.3.6). The details in all three LA DOCs are similar; however there are references in the DOCs that are either not specific or appear inapplicable to these ITS subsections. For example, there are references to NRC-approved power uprate amendments that do not appear to affect the instrumentation Functions in ITS Subsections 3.3.4, 3.3.5, and 3.3.6. Also, references to Regulatory Guide 1.105 and industry standard ANSI/ISA-RP67.04 do not have revision numbers; this is vital as each revision has varying content. The licensee is requested to revise these DOCs to provide only relevant justification for removal of trip setpoint values, and include revision numbers of the applicable regulatory guidance and industry standard documents to which it is committed in the current licensing basis for Turkey Point Units 3 and 4.