Florida Power & Light, 9760 S.W. 344 St. Homestead, FL 33035

FPL.

JAN 19 2012
L-2012-033
10 CFR 50.90

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

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Response to NRC Instrumentation and Control Engineering Branch Request for Additional Information Regarding Extended Power Uprate License Amendment Request No. 205

References:

(1) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2010-113), "License Amendment Request for Extended Power Uprate (LAR 205)," (TAC Nos. ME4907 and ME4908), Accession No. ML103560169, October 21, 2010.

(2) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2011-005), "Response to NRC Request for Additional Information (RAI) Regarding Extended Power Uprate (EPU) License Amendment Request (LAR) No. 205 and Instrumentation & Control (I&C) Issues – Round 1," Accession No. ML110330190, January 28, 2011.

(3) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2011-153), "Response to NRC Request for Additional Information Regarding Extended Power Uprate License Amendment Request No. 205 and Instrumentation and Controls Issues," Accession No. ML11115A113, April 22, 2011.

(4) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2011-190), "Response to NRC Request for Additional Information Regarding Extended Power Uprate License Amendment Request No. 205 and Instrumentation and Controls Issues," Accession No. ML11174A165, June 21, 2011.

(5) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2011-302), "Response to NRC RAI Regarding EPU LAR No. 205 and Technical Specification and Instrumentation and Control Issues," Accession No. ML11242A159, August 29, 2011.

(6) Technical Specification Task Force (TSTF) No. 493, Rev. 4, "Clarify Application of Setpoint Methodology for LSSS Functions," January 2010.

(7) WCAP-17070-P, Revision 1, "Westinghouse Setpoint Methodology for Protection Systems for Turkey Point Units 3 and 4 (Power Uprate to 2644 MWt – Core Power)," June 2011.

(8) Email from J. Paige (NRC) to S. Hale (FPL), "Questions Regarding Instrument Uncertainty," January 12, 2012.

By letter L-2010-113 dated October 21, 2010 [Reference 1], Florida Power and Light Company (FPL) requested to amend Renewed Facility Operating Licenses DPR-31 and DPR-41 and revise the Turkey Point Units 3 and 4 (PTN) Technical Specifications (TS). The proposed amendment will increase each unit's licensed core power level from 2300 megawatts thermal (MWt) to 2644 MWt and revise the Renewed Facility Operating Licenses and TS to support operation at this increased core thermal power level. This represents an approximate increase of 15% and is therefore considered an extended power uprate (EPU).

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FPL responded to several Requests for Additional Information (RAIs) from the U. S. Nuclear Regulatory Commission's (NRC) Instrumentation and Control Engineering Branch (EICB) [References 2, 3, 4, & 5] regarding PTN's site specific implementation of TSTF-493 Option A [Reference 6] via the setpoint methodology provided in WCAP-17070-P [Reference 7].

Coinciding with the Advisory Committee on Reactor Safeguards (ACRS) subcommittee meeting on PTN's EPU application on December 14, 2011 in Rockville, MD, a meeting was held between the NRC staff and utility representatives including Westinghouse staff regarding implementation of TSTF-493 requirements. As a result of the meeting, the NRC Project Manager (PM) issued an RAI on behalf of the EICB staff via an email dated January 12, 2012 [Reference 8]. The NRC RAI consisted of two questions pertaining to the treatment of instrument uncertainty and the corrective action program. FPL's response to the second RAI question is provided in Attachment 1 to this letter. The response to the first RAI question will be provided later via separate correspondence.

In accordance with 10 CFR 50.91(b)(1), a copy of this letter is being forwarded to the State Designee of Florida.

This submittal does not alter the significant hazards consideration or environmental assessment previously submitted by FPL letter L-2010-113 [Reference 1].

This submittal contains no new commitments and no revisions to existing commitments.

Should you have any questions regarding this submittal, please contact Mr. Robert J. Tomonto, Licensing Manager, at (305) 246-7327.

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

Executed on January 19, 2012.

Very truly yours,

Eric McCarthy for M. Kiley

Michael Kiley
Site Vice President
Turkey Point Nuclear Plant

Attachment

cc: USNRC Regional Administrator, Region II
USNRC Project Manager, Turkey Point Nuclear Plant
USNRC Resident Inspector, Turkey Point Nuclear Plant
Mr. W. A. Passetti, Florida Department of Health

Turkey Point Units 3 and 4

RESPONSE TO NRC INSTRUMENTATION AND CONTROL ENGINEERING BRANCH REQUEST FOR ADDITIONAL INFORMATION REGARDING EXTENDED POWER UPRATE LICENSE AMENDMENT REQUEST NO. 205

ATTACHMENT 1

Response to Request for Additional Information

The following information is provided by Florida Power and Light Company (FPL) in response to the U. S. Nuclear Regulatory Commission's (NRC) Request for Additional Information (RAI). This information was requested to support License Amendment Request (LAR) 205, Extended Power Uprate (EPU), for Turkey Point Nuclear Plant (PTN) Units 3 and 4 that was submitted to the NRC by FPL via letter (L-2010-113) dated October 21, 2010 [Reference 1].

FPL responded to several RAIs from the NRC's Instrumentation and Control Engineering Branch (EICB) [References 2, 3, 4, and 5] regarding PTN's site specific implementation of TSTF-493 Option A [Reference 6] via the setpoint methodology provided in WCAP-17070-P [Reference 7].

Coinciding with the Advisory Committee on Reactor Safeguards (ACRS) subcommittee meeting on PTN's EPU application on December 14, 2011 in Rockville, MD, a meeting was held between the NRC staff and utility representatives including Westinghouse staff regarding implementation of TSTF-493 requirements. As a result of the meeting, the NRC Project Manager (PM) issued an RAI on behalf of the EICB staff via an email dated January 12, 2012 [Reference 8]. The NRC RAI consisted of two questions pertaining to the treatment of instrument uncertainty and the corrective action program. FPL's response to the second RAI question is presented below. The response to the first RAI question will be provided later via separate correspondence.

Question 1 **WCAP-17070-P, Rev. 1 (ML1174A168) submitted by Florida Power & Light Company (FPL) provided the Westinghouse Setpoint Methodology for Protection Systems Turkey Point Units 3 & 4 (Power Uprate to 2644 MWt – Core Power). Tables 3-1 through Table 3-11 (pages 19 to 44) of WCAP-17070-P, Rev. 1, lists uncertainty allowances for the parameters of the revised setpoints. Many of the uncertainty allowances have values of zero with little or no explanations. A few notes have been provided for some of the uncertainty allowances that are zero. Section 3.2 "Definitions for Protection System Setpoint Tolerances" of WCAP-17070-P defines "Normalization" to be a process for establishing a relationship between a process parameter and an instrument channel involving an indirect measurement. An example is provided for this definition which describes the process of determining steam mass flow by conducting a mass balance for feed water flow and steam flow using the relationships of the known feed water venturi differential pressure, feed water temperature and pressure parameters for feed water flow, and the assumption that the pounds mass of steam flow must be the same as the feed water mass flow assuming no losses. However, the notes for some other reactor protection channel parameter uncertainties uses the term "normalized" without providing further explanation as to how this normalization process is accomplished. (Examples: For OPDT and OTDT: a) Hot Leg and Cold Leg process measurement uncertainty due to streaming effects are "treated as a bias, normalized out"; b) Sensor Measurement and Test Equipment Accuracy ΔT "Included in normalization process"; c) Sensor drift ΔT "Included in burndown effects"; d) Overtemperature ΔT pressure bias (seismic); and others. The NRC staff requests the licensee to provide an explanation justifying any reductions in magnitude or new ways of applying uncertainty allowance values that are included within the determination of Channel Statistical Allowance (CSA) and**

include a detailed explanation as to how the effects of those uncertainties have been accounted for, and provide detailed explanations and justifications for all uncertainty allowances listed with a value of zero.

The response to Question 1 will be provided later via separate correspondence.

Question 2 **For the proposed limiting safety system setting setpoint changes with TSTF-493 Option A, the licensee commits to apply the two Technical Specification table footnotes applicable to performance monitoring. Adherence to TSTF-493 requires that the licensee maintain a corrective action program (CAP) when the setpoints are found outside the allowable limits. The licensees are expected to have administrative controls or a corrective action program in place for other reactor protection system (RPS) and engineered safety feature actuation system (ESFAS) setpoints (Setpoints that are not covered by TSTF-493, Option A) to track instrument performance in support of 10 CFR 50.36(c)(1)(ii)(A). Staff expects that the licensee is maintaining the TSTF-493, Option A CAP as well as the original performance monitoring program for all other RPS and ESFAS setpoints. Please confirm that FPL is maintaining these programs.**

The NRC issued guidance in January 2010 for proposed changes to Standard Technical Specifications (TS) with respect to limiting safety system settings (LSSS) known as "Technical Specifications Task Force Traveler TSTF-493, Clarify Application of Setpoint Methodology for LSSS Functions" [Reference 5]. TSTF-493 clarifies TS for safety related instrumentation to ensure compliance with 10 CFR50.36, Technical Specifications.

For Turkey Point Nuclear (PTN) units, the scope of TSTF-493 is limited to those setpoints that are being modified as a result of implementation of the Extended Power Uprate (EPU) Project. The NRC identified two separate options on how LAR submittals need to address the adoption of TSTF-493 Revision 4. For the setpoints affected by EPU, PTN is following the "Option A" format by applying two TS table footnotes applicable to performance monitoring. Adherence to TSTF-493 requires that PTN maintain a corrective action program (CAP) when the setpoints are found outside the allowable limits.

In addition to those setpoints modified by EPU, the NRC expects licensees to have administrative controls or a CAP in place for the RPS and ESFAS setpoints not covered by TSTF-493, Option A (i.e., the RPS and ESFAS setpoint not affected by EPU) to track instrument performance in support of 10 CFR 50.36(c)(1)(ii)(A).

FPL currently utilizes an administrative procedure to provide the instructions necessary to perform an evaluation of As-Found RPS and ESFAS Setpoints to determine past and present operability of the affected instruments.

In accordance with the procedure, if the instrument's As-Found condition causes a RPS or ESFAS instrumentation trip/interlock to be less conservative than the TS allowable value, the Responsible I&C Maintenance Supervisor is required to immediately initiate a Condition Report in accordance with PTN's applicable CAP procedure and notify the Shift Manager which instrument(s) are involved

and the time that the instrument(s) were determined to be inoperable.

This procedure is performed whenever the accuracy of any instrument affecting the actuation of a RPS or ESFAS instrumentation trip/interlock is found outside of the procedural acceptance criteria by the I&C Maintenance technician during instrument surveillance or calibration activities.

In this manner, FPL ensures that any RPS or ESFAS setpoint found outside of its TS Allowable Value is entered into the CAP.

References

1. M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2010-113), "License Amendment Request for Extended Power Uprate (LAR 205)," (TAC Nos. ME4907 and ME4908), Accession No. ML103560169, October 21, 2010.
2. M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2011-005), "Response to NRC Request for Additional Information (RAI) Regarding Extended Power Uprate (EPU) License Amendment Request (LAR) No. 205 and Instrumentation & Control (I&C) Issues – Round 1, ' Accession No. ML110330190, January 28, 2011.
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5. M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2011-302), "Response to NRC RAI Regarding EPU LAR No. 205 and Technical Specification and Instrumentation and Control Issues," Accession No. ML11242A159, August 29, 2011.
6. Technical Specification Task Force (TSTF) No. 493, Rev. 4, "Clarify Application of Setpoint Methodology for LSSS Functions," January 2010.
7. WCAP-17070-P, Revision 1, "Westinghouse Setpoint Methodology for Protection Systems for Turkey Point Units 3 and 4 (Power Uprate to 2644 MWt – Core Power)," June 2011.
8. Email from J. Paige (NRC) to S. Hale (FPL), "Questions Regarding Instrument Uncertainty," January 12, 2012.