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MAR 9 2011
L-2011-079
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 Request for Additional Information Regarding
Extended Power Uprate License Amendment Request No. 205 and
Instrumentation and Controls Issues – Round 2

References:

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

(2) Email from J. Paige (NRC) to T. Abbatiello (FPL), "Turkey Point EPU – Instrumentation and Controls (EICB) Request for Additional Information - Round 2," March 1, 2011.

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 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).

By email from the U.S. Nuclear Regulatory Commission (NRC) Project Manager (PM) dated March 1, 2011 [Reference 2], additional information regarding Instrumentation and Controls (I&C) issues was requested by the NRC staff in the Instrumentation and Controls Engineering Branch (EICB) to support their review of the EPU License Amendment Request (LAR). The Request for Additional Information (RAI) consisted of two (2) questions regarding Leading Edge Flowmeter (LEFM) Out-of-Service (OOS) conditions and FPL's LEFM software configuration program controls. These two RAI questions and the applicable FPL responses are documented in the Attachment to this letter.

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.

A001
NRR

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

Executed on March 9th, 2011.

Very truly yours,

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 RAI REGARDING EPU LAR NO. 205
AND EICB INSTRUMENTATION AND CONTROLS ISSUES - ROUND 2

ATTACHMENT

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) No. 205, Extended Power Uprate (EPU), for Turkey Point Nuclear Plant (PTN) Units 3 and 4 that was submitted to the NRC by FPL letter L-2010-113 on October 21, 2010 [Reference 1].

In an email dated March 1, 2011 [Reference 2], the NRC staff requested additional information regarding FPL's request to implement the EPU. The RAI consisted of two (2) questions from the NRC Instrumentation and Controls Engineering Branch (EICB) regarding the Leading Edge Flowmeter (LEFM) Out-of-Service (OOS) conditions and the LEFM software configuration program controls. These two RAI questions and the FPL responses are documented below.

EICB-2.1 **By letter dated January 28, 2011, the licensee provided a table with Maximum MWt for each LEFM OOS condition in page 10 of RAI response (FPL L-2011-005 Attachment 1) and stated that those values have been truncated to provide conservative values. However, all the four Maximum MWt values in the table are one MWt higher than allowable values calculated by the NRC staff. Those values should be calculated with the base of 2599 MWt (2300MWt * 1.13 = 2643 MWt). Confirm that you agree to revise those four Maximum MWt values (to 2643.0, 2640.0, 2639.0, 2638.0) or provide justification with detailed calculations for using one MWt higher.**

The table shown here was provided in response to EICB RAI Question 5c.

Maximum MWt	Total Power Uncertainty %	LAR Table 2.4.4-1
2644.0	0.30%	System Fully Functional
2640.7	0.42%	One Section (Plane) in any One LEFM in Maintenance
2640.2	0.44%	One Section (Plane) in any Two LEFMs in Maintenance
2639.4	0.47%	One Section (Plane) in all Three LEFMs in Maintenance

Note: These values have been truncated to provide conservative values.

Maximum MWt total power values were calculated using the uprated licensed thermal power rating of 2644.0 MWt as presented in Reference 1. The licensed EPU power level is an approximately 13% increase over the existing 2300 MWt power level (actual power increase is 13.035% in addition to the LEFM uncertainty to obtain an EPU thermal power rating of 2644 MWt). The equation used to generate the MWt values was 2644*1.003/(1+XX) where XX is the power uncertainty value. The values obtained here are slightly larger than those previously provided in response to EICB RAI Question 5c. However, the truncated values are less than both the values provided in response to the previous question and the values derived from the equation presented above. See table below.

Uncertainty	MWt	Maximum MWt (truncated)
0.30%	2644.00	2644
0.42%	2640.84	2640
0.44%	2640.31	2640
0.47%	2639.52	2639

EICB-2.2 **Section 2.4.4.2.2, I.4 "System Maintenance" (pages 2.4.4-5 and 2.4.4-6) addresses NRC RIS 2002-03 item I.1.F.ii "controlling software and hardware configuration." The licensee briefly addressed hardware configuration, however, the licensee does not mention the plant software configuration program of the Cameron LEFM CheckPlus system. Provide a brief description of your plant configuration programs and address how you control the software configuration at the plant.**

This response is focused on software control as applicable to NRC Regulatory Issue Summary (RIS) 2002-03, "Guidance on the Content of Measurement Uncertainty Recapture Power Uprate Applications."

Software is controlled in accordance with the FPL Software Quality Assurance (SQA) Program. This program utilizes a graded approach to provide software control requirements that are commensurate with importance to plant safety, regulatory commitments and corporate responsibility. Four SQA classifications are defined: Level A pertaining to Safety Related functions, Level B pertaining to Regulatory and Quality Related functions, Level C pertaining to business critical or plant reliability functions and Level D pertaining to other less critical functions. Calorimetric power calculations are performed by the Distributed Control System (DCS) computer system. The results of the calorimetric are used to adjust the Nuclear Instrumentation Power Range channels in accordance with Technical Specification Table 4.3-1, and to comply with the operating license limits on reactor core power levels. In accordance with the grading scheme defined in the program, the Cameron LEFM CheckPlus and DCS calorimetric software are classified as Level B. SQA program requirements for Level B software include: configuration control via the Master Software Index, Software Classification Determination, Software Quality Assurance Plan, Software Requirements Specification, Software Design Description, Software Verification and Validation Plan, Backup / Recovery Contingency Planning and QA Record Storage.

Hardware and process control software changes are governed by a design change (configuration control) program. The process applies to the development, processing, and control of design change packages for changes/modifications to power plant related Systems, Structures and Components (SSC).

In addition to the normal configuration control aspects of design change packages, software/firmware design, configuration and disaster recovery control is governed by the requirements outlined in the FPL SQA program. The SQA program assures that the classification, installation, modification, removal and maintenance of

software / firmware are performed in a consistent and detailed manner. The SQA program has been developed to comply with industry standards. In addition, software and firmware installations are configured, installed and maintained in accordance with FPL's Cyber Security program requirements.

References

1. M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2010-113), "License Amendment Request No. 205: Extended Power Uprate (EPU)," (TAC Nos. ME4907 and ME4908), Accession No. ML103560169, October 21, 2010.
2. Email from J. Paige (NRC) to T. Abbatiello (FPL), "Turkey Point EPU - Instrumentation and Controls (EICB) Request for Additional Information - Round 2," March 1, 2011.