



JUN 09 2011
L-2011-199
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
Fire Protection Issues

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 - Fire Protection (AFPB) Request for Additional Information - Round 1," Accession No. ML110340027, February 2, 2011.
- (3) M. Kiley (FPL) to U.S. Nuclear Regulatory Commission (L-2011-027), "Response to NRC Request for Additional Information (RAI) Regarding Extended Power Uprate (EPU) License Amendment Request (LAR) No. 205 and Fire Protection Issues," February 22, 2011.
- (4) Email from J. Paige (NRC) to T. Abbatiello (FPL), "Turkey Point EPU - Fire Protection (AFPB) Request for Additional Information - Round 2", Accession No. ML11140A081, May 19, 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 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 NRC Project Manager (PM) dated February 2, 2011 [Reference 2], additional information regarding fire protection issues was requested by the NRC staff in the Fire Protection Branch (AFPB) to support the review of the EPU LAR [Reference 1]. The Request for Additional Information (RAI) consisted of five (5) questions regarding procedure/resource impacts, modification impacts, OMA's, and potential use of the fire protection system for non-fire-suppression activities. FPL provided its response to the RAI via letter L-2011-027 on February 22, 2011 [Reference 3].

By email from the NRC PM dated May 19, 2011 [Reference 4], additional information regarding fire protection issues was again requested by the NRC AFPB staff in support of its review of the EPU LAR [Reference 1]. The RAI consisted of two follow-up questions regarding time critical manual operator actions and non-fire suppression use of the fire protection water supply. The RAI questions and FPL responses are documented in the Attachment to this letter.

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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 June 9, 2011.

Very truly yours,

A handwritten signature in black ink, appearing to read "Michael Kiley", written in a cursive style.

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 AFPB FIRE PROTECTION ISSUES

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) 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].

By email from the NRC Project Manager (PM) dated February 2, 2011 [Reference 2], additional information regarding fire protection issues was requested by the NRC staff in the Fire Protection Branch (AFPB) to support the review of the EPU LAR [Reference 1]. The Request for Additional Information (RAI) consisted of five questions regarding procedure/resource impacts, modification impacts, Operator Manual Actions (OMAs), and potential use of the fire protection system for non-fire-suppression activities. FPL provided its response to the RAI via letter L-2011-027 on February 22, 2011 [Reference 3].

By email from the NRC PM dated May 19, 2011 [Reference 4], additional information regarding fire protection issues was again requested by the NRC AFBP staff in support its review of the EPU LAR. The RAI consisted of two follow-up questions regarding time critical OMAs and non-fire suppression use of the fire protection water supply. The RAI questions and the applicable FPL responses are documented below.

AFPB-2.1 It appears that the original program allowed 15 minutes to isolate the PORV line from the remote shutdown panel. If the PORV and block valve open upon control room evacuation, typically, irrecoverable conditions will occur within about 5 minutes. It is not clear that the 5 minute time is at the beginning of the event or if it's a new operator manual action to open the breaker (i.e., addition of a new step in the control room to isolate the PORV/block valve in the control room prior to evacuation). The NRC staff requests the licensee to provide the actual time for the operator to perform the necessary actions, including the anticipated "time margin" between when the actions are completed and when any thermal-hydraulic constraints are likely to be reached.

As indicated in FPL's response to AFBP-1.4 in Reference 3, in the event of a fire in the main control room that requires its evacuation, the off-normal procedure on control room evacuation currently includes direction for the unit reactor operators to immediately close both of their unit PORV block valves prior to evacuating the control room, if possible. The procedure further directs the station nuclear plant operator to open seven breakers in DC distribution panels in the battery charger rooms and four breakers in DC distribution panels in the inverter rooms and that these actions should be completed within 5 minutes. These breakers include two DC breakers that provide the control power to PORVs PCV-3/4-456. The opening of two additional DC breakers will be incorporated into the existing procedure to assure that control power to PORVs PCV-3/4-455C is also removed in order to preclude any spurious opening of either of these PORVs. PORVs PCV-3/4-455C and PORV Block Valves MOV-3/4-535 are verified closed at their respective unit's Alternate Shutdown Panel (ASP) by the Reactor Operator. These breakers are not being incorporated into the procedure as a result of the EPU but rather as an

enhancement to the defense in depth provisions in the procedure for response to a fire in the main control room.

The addition of another breaker to the list of breakers to be opened at each of the DC distribution panels above is expected to add no more than a few seconds to the current action completion time. Therefore, the impact created by the addition of the two breakers is considered minimal and the actions will continue to be completed within the current allotted time period.

AFPB-2.2 **As stated in your letter dated February 22, 2011, “However, during off-normal or emergency conditions, Turkey Point Units 3 and 4 does use fire water for make up to the Condensate Storage Tank, Refueling Water Storage Tank, Containment, and Spent Fuel Pools. Procedural guidance is provided to ensure the fire system remains capable of responding to a fire if applicable. Provisions for using fire water for off-normal or emergency evolutions are not changed as a result of EPU.” Explain the capabilities of the fire water if a fire event occurs during off-normal or emergency conditions? Can the fire protection hydraulic demands (fire suppression system water flow demands) be met?**

Regarding FPL’s response to AFPB-1.5 in Reference 3, the purpose of the cited statement was to acknowledge that fire water may be used for non-fire applications and that there are procedural controls and guidance for doing so. This capability allows for plant operational flexibility in responding to off-normal and beyond design basis events as directed in the Severe Accident Management Guidelines (SAMGs). Note that the Turkey Point licensing basis does not require that design basis fires be assumed during beyond design basis events. Regardless, the fire water supply system contains significant flow margin such that this flexibility does not compromise hydraulic demands required for fire protection.

Fire water makeup to the Condensate Storage Tanks, Refueling Water Storage Tanks, Containments and Spent Fuel Pools is only required when normal makeup sources are unavailable. For off-normal conditions, the maximum makeup flow requirement is ~100 gpm, and for beyond design basis events the maximum flow requirement is ~500 gpm.

Hydraulic flow testing of the fire protection system has demonstrated at least 700 gpm of margin above the maximum flow demand to address fire protection requirements as defined in UFSAR Appendix 9.6A Section 3.1.3. This margin bounds the maximum non-fire protection makeup flow requirements for off-normal and beyond design basis events described above. Thus, fire protection hydraulic demands are met even under conditions where the fire water system is supplying the maximum non-fire protection makeup flow for off-normal or beyond design basis conditions.

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 - Fire Protection (AFPB) Request for Additional Information - Round 1," Accession No. ML110340027, February 2, 2011.
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4. Email from J. Paige (NRC) to T. Abbatiello (FPL), "Turkey Point EPU – Fire Protection (AFPB) Request for Additional Information - Round 2", Accession No. ML11140A081, May 19, 2011.