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50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251

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RECIP. NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Application for amends to licenses DPR-31 & DPR-41, adding to approved COLR analysis methodology used for SBLOCA analysis in anticipation of thermal uprate to 1300 MWt for both units & to increase current margin to calculated peak.

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L-95-193
10 CFR §50.36
10 CFR §50.90

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

Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Proposed License Amendments
Small Break Loss-of-Coolant Accident (SBLOCA) Re-analysis

In accordance with Title 10 Code of Federal Regulations §50.90 (10 CFR §50.90), Florida Power and Light Company (FPL) requests that Appendix A of Facility Operating Licenses DPR-31 and DPR-41 be amended to modify Turkey Point Units 3 and 4 Technical Specification (TS) 6.9.1.7, Core Operating Limits Report (COLR). This requested change will add to the approved COLR analysis the methodology used for the SBLOCA analysis in anticipation of a thermal uprate to 2300 MWt for both units, as well as to increase the current margin to the calculated peak cladding temperature (PCT).

A description of the amendments request is provided in Attachment 1. FPL has determined that the proposed license amendments do not involve a significant hazard pursuant to 10 CFR §50.92. The no significant hazards determination in support of the proposed Technical Specification change is provided in Attachment 2. Attachment 3 provides the proposed revised Technical Specifications. Attachment 4 documents the analysis performed and results using the new methodology for SBLOCA calculations.

In accordance with 10 CFR §50.91(b)(1), a copy of these proposed license amendments are being forwarded to the State Designee for the State of Florida.

The proposed amendments have been reviewed by the Turkey Point Plant Nuclear Safety Committee and the FPL Company Nuclear Review Board.

Should there be any questions on this request, please contact us.

Very truly yours,

T. F. Plunkett
Vice President
Turkey Point Plant

CDV

Attachments

cc: S. D. Ebner, Regional Administrator, Region II, USNRC
T. P. Johnson, Senior Resident Inspector, USNRC, Turkey Point
W. A. Passetti, Florida Department of Health and Rehabilitative
Services

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STATE OF FLORIDA)
) ss.
COUNTY OF DADE)

T. F. Plunkett being first duly sworn, deposes and says:

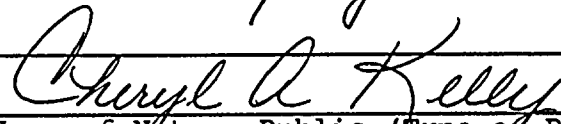
That he is Vice President, Turkey Point Plant, of Florida Power and Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information and belief, and that he is authorized to execute the document on behalf of said Licensee.


T. F. Plunkett

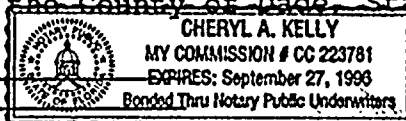
Subscribed and sworn to before me this

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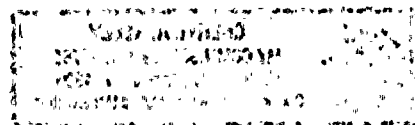

Name of Notary Public (Type of Print)

NOTARY PUBLIC, in and for ~~the County of Dade~~, State of Florida

My Commission expires _____
Commission No. _____



T. F. Plunkett is personally known to me.



ATTACHMENT 1

DESCRIPTION OF AMENDMENT REQUESTS

Introduction

In preparation for the planned Turkey Point Units 3 and 4 thermal uprate from 2200 to 2300 MWt, a new Small Break Loss-of-Coolant Accident (SBLOCA) analysis was performed using the NRC-approved NOTRUMP Evaluation Model with a presently unapproved addendum that includes modifications made for condensation (COSI) and Safety Injection (SI) in the broken loop. Approval of this addendum is requested as part of this submittal. The new analysis also incorporates assumptions for a reduction in the Auxiliary Feedwater flow delay time, lower Reactor Coolant System flow, an expanded average coolant temperature band about the nominal, and a degraded High Head Safety Injection flow. The SBLOCA analysis was revised for Turkey Point Units 3 and 4 to ensure that the acceptance criteria of 10 CFR §50.46 are met at the uprated conditions. FPL requests to update the current Turkey Point Units 3 and 4 Technical Specifications (TS) to reference the methodology used for the SBLOCA/COSI analysis.

Discussion

Attachment 4 contains the detailed methods, analysis, and results of the Westinghouse NOTRUMP Evaluation Model for the SBLOCA analysis. The following is a brief summary of that report.

The limiting case from the Turkey Point Units 3 and 4 SBLOCA analysis performed in support of the 2300 MWt power uprate program was determined to be a 3-inch break with a calculated peak cladding temperature (PCT) of 1688°F. Since a one-line segment K(z) curve was input directly into the SBLOCA analysis, the results inherently incorporate any PCT effect. The one-line segment K(z) used in the SBLOCA analysis bounds the two-line segment K(z) curve currently in the Core Operating Limits Report (COLR), since the assumed power shape is not restricted by the second line segment in the revised analysis.

As shown by the calculated results, the SBLOCA PCT maintains margin to the 2200°F acceptance criteria of 10 CFR §50.46 for the SBLOCA analysis. There is significant margin in the current SBLOCA analysis such that the total cladding oxidation limit of 17 percent will not be challenged. Further, the calculated total amount of hydrogen generated has been determined to remain less than the limit of 1 percent. The SBLOCA hydraulic forces are not affected by the K(z) curve and Westinghouse concluded that the post-accident core would maintain a coolable geometry. Additionally, post-LOCA long term core cooling and hot leg switchover evaluations are not impacted by the K(z) curve. Therefore, the core temperature is maintained at an acceptably low value and decay heat is removed for the extended period of time required for the long-lived radioactivity remaining in the

core. FPL therefore concludes that, since the bounding one-line segment K(z) curve does not result in a violation of the requirements of 10 CFR §50.46, the less limiting two-line segment K(z) in the COLR is supported.

Proposed Technical Specifications Changes

FPL proposes to change the following Technical Specification in support of the proposed amendments:

1. TS 6.9.1.7 - Core Operating Limits Report

The TS Administrative Controls Section 6.9.1.7 will be modified to reference the supporting Evaluation Model for the K(z) curve contained in the COLR.

The following references will be added to Section 6.9.1.7 (COLR) of the Administrative Controls section of Turkey Point Units 3 and 4 TS:

3. "WCAP-10054-P-A, (proprietary) and WCAP-10081-NP-A, (non-proprietary), "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code", October, 1985."
4. WCAP-10054-P-A Addendum 2, (proprietary), "Addendum to the Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code: Safety Injection into the Broken Loop and COSI Condensation Model", August, 1994."

Justification: The current TS will be updated to reflect the SBLOCA model being used for Turkey Point Units 3 and 4 to support the uprated conditions and increase current margin to PCT.

Summary

The proposed Turkey Point Units 3 and 4 TS amendments will document the new methodology used for the SBLOCA analysis in the K(z) curve contained in the COLR. The NRC-approved NOTRUMP Evaluation Model, with appropriate modifications made for COSI/SI, verifies that the proposed uprate will not exceed the limitations set forth in 10 CFR §50.46, and will actually increase the current analytical margin to PCT.

ATTACHMENT 2

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

Description of Proposed License Amendments

The Technical Specification Administrative Controls Section 6.9.1.7 will be modified to reflect the use of the Westinghouse NOTRUMP model in the Small Break Loss-of-Coolant Accident (SBLOCA) analysis used in determining the K(z) curve contained in the Core Operating Limits Report (COLR).

The following references will be added to Section 6.9.1.7 (COLR) of the Administrative Controls section of Turkey Point Units 3 and 4 TS:

"WCAP-10054-P-A, (proprietary) and WCAP-10081-NP-A, (non-proprietary), "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code", October, 1985."

WCAP-10054-P-A Addendum 2, (proprietary), "Addendum to the Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code: Safety Injection into the Broken Loop and COSI Condensation Model", August, 1994."

Introduction

The Nuclear Regulatory Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. Each standard is discussed below for the proposed license amendments.

Discussion

- (1) Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

The modification to the current Section 6.9.1.7 of the Administrative Controls section of the Turkey Point Technical Specifications to include the references to WCAP-10054-P-A, "Small Break ECCS Evaluation Model Using the NOTRUMP Code", and WCAP-10054-P-A Addendum 2 for the COSI model, does not involve an increase in the probability or consequences of an accident



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previously evaluated. This modification to the Technical Specification does not change the probability of occurrence previously evaluated.

This change does not affect the integrity of the fission product barriers utilized for mitigation of radiological dose consequences as a result of an accident. The addition of the new methodology used for Turkey Point uprating analysis does not change, degrade, or prevent the response of safety related mitigation systems to accident scenarios, as described in the Updated Final Safety Analysis Report (UFSAR) Chapter 14. Therefore, FPL concludes that the probability or consequences of an accident previously evaluated are not increased.

- (2) Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The modification to the current Section 6.9.1.7 of the Administrative Controls section of the Turkey Point Technical Specifications to include the references to WCAP-10054-P-A, "Small Break ECCS Evaluation Model Using the NOTRUMP Code", and WCAP-10054-P-A Addendum 2 for the COSI model, will not create the possibility of a new or different kind of accident from any accident previously evaluated. No new operating configuration is being imposed by the addition of the references to the Technical Specification. Therefore, no new failure modes or limiting single failures have been identified. FPL concludes that no new or different kind of accidents from those previously evaluated have been created as a result of this revision.

- (3) Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in the margin of safety.

The modification to the current Section 6.9.1.7 of the Administrative Controls section of the Turkey Point Technical Specifications to include the references for the Small Break ECCS Evaluation Model Using the NOTRUMP Code will not involve a reduction in the margin of safety. The SBLOCA analysis results show that the limits of 10 CFR §50.46 are maintained as follows. The new calculated value of worst-case PCT will be 1688°F, which is less than the limit of 2200°F. There is significant margin in the current SBLOCA analysis such that the total cladding oxidation limit of 17 percent will not be challenged. Further, the calculated total amount of hydrogen generated has been determined to remain less than 1 percent. The SBLOCA hydraulic forces are not affected by the K(z) curve and FPL concludes that the core will remain amenable to cooling. Additionally, post-LOCA long term core cooling and hot leg switchover evaluations are not impacted by the K(z) curve. Therefore, there is no significant reduction in the margin of safety.

L-95-193
Attachment 2
Page 3

Summary

Based on the above discussion, FPL has determined that the proposed amendments do not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety; and therefore the proposed changes do not involve a significant hazards consideration as defined in 10 CFR 50.92.



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L-95-193
Attachment 3

ATTACHMENT 3

PROPOSED TECHNICAL SPECIFICATIONS PAGE

6-20