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FACIL:50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
AUTH.NAME AUTHOR AFFILIATION
PLUNKETT, T.F. Florida Power & Light Co. *See WCAP-14237 & WCAP-14238P*
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk) R

SUBJECT: Forwards nonproprietary WCAP-14238 & proprietary WCA-14237, "Technical Justification for Eliminating Large Primary Loop Pipe Rupture as Structural Design Basis...", demonstrating compliance w/LBB methodology. Proprietary rept withheld.

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10 CFR 50 Appendix A

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
Request to Utilize Leak Before Break Methodology
For Reactor Coolant System Piping

General Design Criterion (GDC) 4 allows plants to exclude the dynamic effects of postulated pipe ruptures from the plant design basis when analyses reviewed and approved by the NRC demonstrate that the probability of fluid system piping rupture is extremely low. The enclosed Leak Before Break Analysis is submitted by Florida Power & Light Company (FPL) to allow elimination of the dynamic effects of pipe rupture in the reactor coolant system piping at Turkey Point Units 3 and 4. FPL requests the NRC's review and approval of the enclosed reports by August 1, 1995, to support the Turkey Point Thermal Upate Project.

The enclosure includes:

1. WCAP-14237, Technical Justification For Eliminating Large Primary Loop Pipe Rupture As The Structural Design Basis For The Turkey Point Units 3 And 4 Nuclear Power Plants (Proprietary)
2. WCAP-14238, Technical Justification For Eliminating Large Primary Loop Pipe Rupture As The Structural Design Basis For The Turkey Point Units 3 And 4 Nuclear Power Plants (Non-Proprietary)

The original structural design basis of the reactor coolant system for Turkey Point Units 3 and 4 required consideration of dynamic effects resulting from pipe break and that protective measures for such breaks be incorporated into the design. Subsequent to the original Turkey Point design, additional concern of asymmetric blowdown loads was raised as described in Unresolved Safety Issue A-2 (Asymmetric Blowdown Loads on the Reactor Coolant System) and Generic Letter 84-04. However, research by the NRC and industry coupled with operating experience determined that safety could be negatively impacted by placement of pipe whip restraints on certain systems. As a result, NRC and industry initiatives resulted in demonstrating that Leak Before Break (LBB) criteria can be applied to reactor coolant system piping based on fracture mechanics technology and material toughness. Generic analyses by Westinghouse for the application of LBB for specific plants was documented in response to GL 84-04 and approved for Turkey Point in NRC letter dated November 28, 1988. By letter dated November 28, 1988, the NRC made the following statements:

"Generic Letter 84-04 stated that an acceptable technical basis had been provided so that the asymmetric blowdown loads resulting from double-ended pipe breaks in main coolant loop piping need not be considered as a design basis for certain plants, including Turkey Point Units 3 and 4, provided two conditions are satisfied. However, of the two conditions, only the one relating

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to the leakage detection system applies to Turkey Point Units 3 and 4. Specifically, that condition requires that leakage detection system be sufficient to provide adequate margin to detect the leakage from the postulated circumferential throughwall flaw utilizing the guidance of Regulatory Guide 1.45,.....

We have reviewed your November 1, 1988 submittal and concur that the leakage detection systems at Turkey Point Units 3 and 4 satisfy the requirements in Generic Letter 84-04. This closes MPA [Multi-Plant Action] D-10 for Turkey Point Units 3 and 4. Turkey Point Units 3 and 4 primary loop piping also complies with the revised General Design Criteria 4 (GDC-4) of Appendix A to 10 CFR Part 50, and the dynamic effects of postulated primary loop pipe ruptures may be eliminated from the design basis."

The enclosed WCAPs 14237/14238 demonstrate FPL's compliance with LBB technology for the Turkey Point reactor coolant system piping based on a plant specific analysis. These WCAPs conclude that the dynamic effects of reactor coolant system primary loop pipe breaks need not be considered in the structural design basis of Turkey Point Units 3 and 4.

As Item 1 contains information proprietary to Westinghouse Electric Corporation, it is supported by an affidavit signed by Westinghouse, the owner of the information. The affidavit sets forth the basis on which information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b) (4) of section 2.790 of the Commission's regulations.

Enclosed are a Westinghouse Authorization Letter, CAW-95-768, accompanying affidavit, Proprietary Information Notice and Copyright Notice.

It is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.790 of the Commissions's regulations.

Correspondence with respect to the copyright or proprietary aspects of the items listed above or the supporting Westinghouse Affidavit should reference CAW-95-768 and should be addressed to N. J. Liparulo, Manager of Nuclear Safety & Regulatory Activities, Westinghouse Electric Corporation, P. O. Box 355, Pittsburgh, Pennsylvania 15230-0355.

Should there be any questions or comments regarding this information, please contact us.

Very truly yours,



T. F. Plunkett
Vice President
Turkey Point Plant

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TFP/RJT/rt
Enclosures

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

STATE OF FLORIDA)
) ss.
COUNTY OF DADE)

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

That he is Vice President, Turkey Point Nuclear 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
T. F. Plunkett

Subscribed and sworn to before me this

2 day of FEB, 1995.

Cheryl A Kelly

Name of Notary Public (Type or 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.



ENCLOSURE (1)

1. WCAP-14237, Technical Justification For Eliminating Large Primary Loop Pipe Rupture As The Structural Design Basis For The Turkey Point Units 3 And 4 Nuclear Power Plants (Proprietary)
2. WCAP-14238, Technical Justification For Eliminating Large Primary Loop Pipe Rupture As The Structural Design Basis For The Turkey Point Units 3 And 4 Nuclear Power Plants (Non-Proprietary)

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ENCLOSURE (2)

- o CAW-95-768, Westinghouse Authorization Letter with accompanying Affidavit
- o Proprietary Information Notice
- o Copyright Notice