

November 24, 1986

Docket Nos. 50-250  
and 50-251

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Mr. C. O. Woody, Group Vice President  
Nuclear Energy Department  
Florida Power and Light Company  
Post Office Box 14000  
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Dear Mr. Woody:

Subject: NUREG-0737, Item II.K.3.31, Small Break LOCA Model

Reference: TAC Numbers 48210 and 48211

Generic Letter (GL) 83-35, "Clarification of TMI Action Plan Item II.K.3.31," indicated that resolution of Item II.K.3.31 may be accomplished by generic analyses. The analyses must demonstrate that the previous NRC approved WFLASH Small Break Loss of Coolant Accident (SBLOCA) Evaluation Model results were conservative when compared with the new NOTRUMP SBLOCA Evaluation Model. By letter dated August 27, 1986, you responded to TMI Action Item II.K.3.31 by referencing WCAP-11145, "Westinghouse SBLOCA ECCS Evaluation Model Generic Study with the NOTRUMP Code."

The staff has reviewed and approved WCAP-11145. The details of the review and basis for acceptance are documented in the letter to L. D. Butterfield (Westinghouse) from E. Rossi (NRC) dated October 6, 1986. Your submittal referenced WCAP-11145 as the basis for meeting the requirements of TMI Action Item II.K.3.31. The staff has concluded that the generic analyses for 3-loop plants of the Turkey Point design demonstrate that the SBLOCA analyses used in the Turkey Point FSAR are conservative in comparison with the NOTRUMP Evaluation Model. Details of the staff's review are included in the enclosed Supplemental Safety Evaluation. Therefore, the requirements of TMI Action Item II.K.3.31 and 10 CFR 50.46 have been met for the Turkey Point Plant Units 3 and 4.

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Mr. C. O. Woody

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This completes our action related to the above referenced TAC numbers.

Sincerely,

Daniel G. McDonald, Senior Project Manager  
PWR Project Directorate #2  
Division of PWR Licensing-A  
Office of Nuclear Reactor Regulation

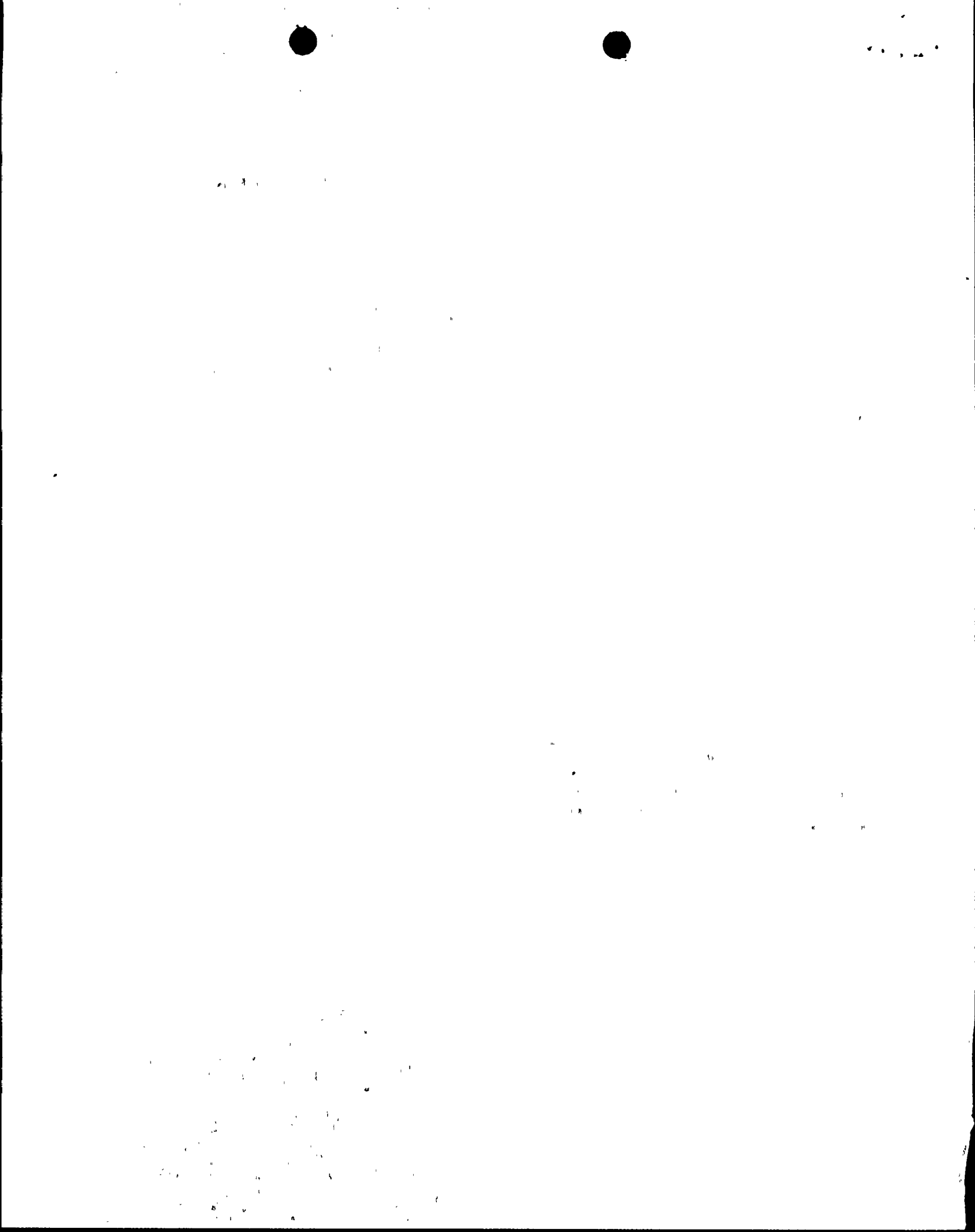
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Florida Power and Light Company

Turkey Point Plant

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15.9.14 II.K.3.31 Plant-Specific Calculations to  
Show Compliance with 10 CFR 50.46  
Supplemental Safety Evaluation by the  
Reactor Systems Branch for  
Turkey Point Units 3 & 4

Section II.K.3.30 of NUREG-0737 outlines the Commission requirements for the industry to demonstrate that its small break LOCA methods continue to comply with the requirements of Appendix K to 10 CFR 50. The technical issues to be addressed were listed in NUREG-0611 including comparison with semiscale experimental test results. In response to Section II.K.3.30, the Westinghouse Owners Group elected to reference the NOTRUMP code as the new licensing small break LOCA model. The NOTRUMP code and methodology are described in WCAP-10079 and WCAP-10054. The staff reviewed and approved NOTRUMP as the new licensing tool for calculating small break LOCA response for Westinghouse plant designs. The staff further concluded that the Westinghouse Owners Group had met the requirements of Section II.K.3.30.

Referencing the new computer code did not imply deficiencies in the WFLASH code (which was previously utilized for small break LOCA analysis) such that the code did not comply with Appendix K to 10 CFR 50. The decision to use NOTRUMP was based on desires of the industry to perform licensing evaluations with a computer program specifically designed to calculate small break LOCAs with greater phenomenological accuracy than capable by WFLASH.

Section II.K.3.31 of NUREG-0737 required that each license holder or applicant submit a new small break analysis using the model approved under II.K.3.30. NPC Generic Letter 83-35 provided clarification for the II.K.3.31 requirements by allowing license holders and applicants to comply on a generic basis by demonstrating that the WFLASH analyses are conservative when compared to analyses performed using NOTRUMP.

In response to this guidance the Westinghouse owners submitted WCAP-11145 which contains generic comparisons to WFLASH analyses for various plant types. These include comparisons for 3-loop plants of the Turkey Point design. If plant specific analyses were performed for Turkey Point using NOTRUMP, lower peak clad temperatures should be expected in comparison with the generic NOTRUMP analysis (about 207°F lower than the 1,605°F PCT currently calculated with WFLASH SBLOCA EM).

Although the calculated peak temperatures are significantly lower for the NOTRUMP analyses than for the WFLASH analyses the 4 inch break remains the limiting break size.

Staff review of WCAP-11145 has been completed and accepted as a licensing basis for SBLOCA analysis. The applicant has referenced WCAP-11145 (which consists of the results from calculations using approved methodology) in lieu of submitting a plant specific analysis and meets the criteria as stated in NRC Generic Letter 83-35. The staff, therefore, concludes that the Turkey Point FSAR analyses of small break LOCA have been demonstrated to be conservative in comparison with the NOTRUMP Evaluation Model. This meets the requirements of II.K.3.31 and 10 CFR 50.46 for Turkey Point.