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SUBJECT: Submits info re estimated effect of change to ECCS evaluation model, as required by 10CFR50.46.

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SERIAL: HNP-99-088
 10 CFR 50.46

MAY 13 1999

United States Nuclear Regulatory Commission
 ATTENTION: Document Control Desk
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SHEARON HARRIS NUCLEAR POWER PLANT
 DOCKET NO. 50-400/LICENSE NO. NPF-63
 EMERGENCY CORE COOLING SYSTEM EVALUATION CHANGES

Dear Sir or Madam:

This letter submits information required by 10 CFR 50.46 for Carolina Power & Light Company's (CP&L's) Harris Nuclear Plant (HNP), regarding the estimated effect of a change to the Emergency Core Cooling System (ECCS) evaluation model. The model change results in a reduction of the fuel Peak Clad Temperature (PCT) for the Small Break Loss of Coolant Accident (SBLOCA) analysis by an amount greater than 50 °F. Thus, this letter fulfills the requirement for a 30-day report in accordance with 10 CFR 50.46(a)(3)(ii).

The HNP ECCS performance following a SBLOCA is calculated by HNP's fuel vendor, Siemens Power Corporation (SPC), using the EXEM PWR Small Break LOCA Model for SBLOCAs. By letter dated April 20, 1999, SPC provided information to CP&L regarding a core nodalization non-convergence problem. The resulting model change to correct this problem was estimated by SPC to reduce the HNP SBLOCA PCT by approximately 158 °F.

The previous SBLOCA PCT reported for HNP was 1986 °F, as documented by letter dated October 1, 1998 to the NRC. Since that time, there have been two additional minor changes to the SBLOCA PCT. These changes were an increase of 2 °F and a decrease of 3 °F, reported to CP&L by SPC letters dated April 14, 1999 and April 15, 1999, respectively. The cumulative impact of the 158 °F and 3 °F reductions, and the 2 °F increase, is a SBLOCA PCT decrease of 159 °F. Since this cumulative impact on PCT is in the conservative direction, HNP will not incorporate the changes into the existing PCT value at this time. Therefore, the SBLOCA PCT for HNP will remain as 1986 °F. Because this PCT value is less than 2200°F for the SBLOCA analysis, HNP remains in compliance with the requirements specified in 10 CFR 50.46(b).

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Questions regarding this matter may be referred to Mr. J. H. Eads at (919) 362-2646.

Sincerely,



D. B. Alexander
Manager, Regulatory Affairs
Harris Plant

AEC

c: Mr. J. B. Brady (NRC Senior Resident Inspector, HNP)
Mr. L. A. Reyes (NRC Regional Administrator, Region II)
Mr. R. J. Laufer (NRR Project Manager, HNP)