CP&L
A Progress Energy Company

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SERIAL: HNP-01-165
10 CFR 50.46

United States Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
EMERGENCY CORE COOLING SYSTEM EVALUATION CHANGES

Dear Sir or Madam:

The purpose of this letter is to submit information required by 10 CFR 50.46 for Carolina Power & Light Company's (CP&L) Harris Nuclear Plant (HNP) concerning 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. Therefore, 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 currently calculated by HNP's fuel vendor, Framatome ANP, using the EXEM PWR Small Break LOCA Model for Small Break Loss of Coolant Accidents. The ECCS performance following a Large Break Loss of Coolant Accident (LBLOCA) is currently calculated for HNP by Framatome ANP using the SEM/PWR-98 ECCS Evaluation Model for LBLOCA Applications. CP&L commenced fuel load for HNP Cycle 11 on December 2, 2001. The new analysis of record to support Cycle 11 operation, including steam generator replacement and power uprate, resulted in the following changes: (1) a decrease of 235°F for SBLOCA PCT, and (2) a decrease of 9°F for LBLOCA PCT. Since the SBLOCA PCT change is greater than 50°F, this change is being reported pursuant to 10 CFR 50.46.

CP&L's most recent annual report to the NRC for HNP was provided by letter dated September 18, 2001 which documented a SBLOCA PCT of 1977°F and LBLOCA PCT of 2005°F. Since that time, there has been one additional SBLOCA model error reported to CP&L by Framatome ANP concerning the RODEX2 code. However, the PCT impact of this error correction is estimated to be 0°F. Therefore, the current HNP PCT values, including the Cycle 11 changes, are: (1) a SBLOCA PCT of 1742°F and (2) a LBLOCA PCT of 1996°F.

Analysis by Framatome ANP has demonstrated that:

(1) The values for PCT, maximum cladding oxidation, and maximum hydrogen generation remain below the limits specified in 10 CFR 50.46(b),
(2) The core remains amenable to cooling during the transient, and
(3) Long term cooling following the transient is maintained.

Therefore, HNP remains in compliance with the requirements specified in 10 CFR 50.46(b).

Harris Nuclear Plant
5413 Shearon Harris Road
New Hill, NC 27562

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Please refer any questions regarding this submittal to Mr. J. Caves at (919) 362-3137.

Sincerely,

R. J. Field
Manager, Regulatory Affairs
Harris Plant

ONW/onw

c: Mr. J. B. Brady, NRC Sr. Resident Inspector
Mr. J. M. Goshen, NRC Project Manager
Mr. B. S. Mallett, NRC Regional Administrator (Acting)