CP&L
A Progress Energy Company

James Scarola
Vice President
Harris Nuclear Plant

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10 CFR 50.46

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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 changes to or errors in the Emergency Core Cooling System (ECCS) evaluation models or in the application of the models. This submittal satisfies CP&L's requirement for annual reporting of evaluation model changes for HNP. CP&L's previous annual report to the NRC for HNP was provided by letter dated September 20, 2000 which documented a Large Break Loss of Coolant Accident (LBLOCA) peak fuel cladding temperature (PCT) of 2010°F and Small Break Loss of Coolant Accident (SBLOCA) PCT of 1977°F.

The HNP ECCS performance following a LBLOCA is currently calculated by HNP's fuel vendor, Framatome ANP, using the SEM/PWR-98 ECCS Evaluation Model for LBLOCA Applications. The ECCS performance following a SBLOCA is currently calculated for HNP by Framatome ANP using the EXEM PWR Small Break LOCA Model for Small Break Loss of Coolant Accidents. Framatome ANP has provided updates to CP&L regarding changes and errors affecting the HNP LBLOCA and SBLOCA PCTs. The PCT impacts of the changes and errors in the LOCA evaluation models are summarized in Tables 1 and 2 for LBLOCA and SBLOCA, respectively.

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Table 1: PCT Impact of Changes in Large Break LOCA Model

CHANGED CONDITION	PCT IMPACT (°F)
Error in TOODEE2 Time Step Sensitivity Calculations	0
PWR LBLOCA Split Break Modeling	0
LBLOCA Normalized Power Calculation for Harris	-9
Potential Variability in End-of-Bypass Prediction by TEOBY	0
Inappropriate Use of Calculated Radiation Heat Transfer in TOODEE2	0
REFLEX Cold Leg Line Length Error	0
RDX2LSE Fast Flux Input Error	0
Accumulator Line Losses	+4
Core Cross-Flow Loss Coefficients	0
Incorrect Bubble Velocity	0
Cumulative Impact	**-5**

Table 2: PCT Impact of Changes in Small Break LOCA Model

CHANGED CONDITION	PCT IMPACT (°F)
Variability in SBLOCA Analysis	0
Cumulative Impact	**0**

HNP's previous annual report to the NRC, dated September 20, 2000, documented a LBLOCA PCT of 2010°F and a SBLOCA PCT of 1977°F. The resulting cumulative impact of -5°F from Table 1 results in a LBLOCA PCT of 2005°F. The cumulative impact of 0°F from Table 2 results in a SBLOCA PCT of 1977°F. This information is current through September 4, 2001.

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 can be maintained.

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

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. N. Kalyanam, NRC Project Manager
Mr. B. S. Mallett, NRC Regional Administrator (Acting)