



SERIAL: HNP-02-125
10 CFR 50.46

SEP 16 2002

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 submitted a report to the NRC for HNP dated December 21, 2001, which documented a LBLOCA PCT of 1996°F and a SBLOCA PCT of 1742°F resulting from a reanalysis to reflect plant modifications associated with a steam generator replacement and power uprate.

The HNP ECCS performance following a LBLOCA is 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 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 Cladding Thermal Expansion	-1
RFPAC V&V Finding	+3
Pump Junction Area	0
Cumulative Impact	+2

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

CHANGED CONDITION	PCT IMPACT (°F)
Error in TOODEE2 Cladding Thermal Expansion	-1
Error in Downcomer Volume	-29
Cumulative Impact	-30

HNP's previous report to the NRC, dated December 21, 2001, documented a LBLOCA PCT of 1996°F and a SBLOCA PCT of 1742°F. The cumulative impact of +2°F from Table 1 results in a LBLOCA PCT of 1998°F. The cumulative impact of -30°F from Table 2 results in a SBLOCA PCT of 1712°F. This information is current through September 13, 2002.

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).

Document Control Desk
HNP-02-125/ Page 3

Please feel free to contact me at (919) 362-3137 if you have any questions regarding this submittal.

Sincerely,



John R. Caves
Supervisor, Licensing/Regulatory Programs
Harris Nuclear Plant

JRC/jpy

c: Mr. J. B. Brady, NRC Sr. Resident Inspector
Mr. R. Subbaratnam, NRC Project Manager
Mr. L. A. Reyes, NRC Regional Administrator