CP&L

Carolina Power & Light Company
Harris Nuclear Plant
PO Box 165
New Hill NC 27562

MAY 3 0 2000

SERIAL: HNP-00-095
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 Large Break Loss of Coolant Accident (LBLOCA) 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 LBLOCA has been analyzed for Cycle 10 by HNP's fuel vendor, Siemens Power Corporation (SPC), using the SEM/PWR-98 ECCS Evaluation Model for LBLOCA Applications, which has been previously reviewed and approved by the NRC. By letter dated January 28, 2000, SPC provided information to CP&L regarding the following HNP LBLOCA PCT changes:

(1) Changes for Cycle 10 operation are estimated to reduce the HNP LBLOCA PCT by approximately 95°F, and
(2) SEM/PWR-98 model implementation is estimated to reduce the HNP LBLOCA PCT by approximately 71°F.

The new analysis of record was in effect to support Cycle 10 fuel load beginning on April 29, 2000 and Cycle 10 initial criticality on May 11, 2000.

The previous LBLOCA PCT reported for HNP was 2007°F, as documented by letter to the NRC dated September 27, 1999. Since that time, there has been one additional minor change to the LBLOCA PCT. This change was a decrease of 11°F, previously reported to the NRC by CP&L letter dated October 1, 1998, but not credited in the LBLOCA PCT of record. This PCT reduction has been realized and is now being credited. Therefore, the cumulative impact of the 95°F, 71°F, and 11°F reductions is a LBLOCA PCT decrease of 177°F, resulting in a LBLOCA PCT of 1830°F for HNP. Analysis by SPC 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

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(3) Long term cooling following the transient is 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. E. McCartney at (919) 362-2661.

Sincerely,

D. B. Alexander

D. B. Alexander
Manager, Regulatory Affairs
Harris Plant

ONW/onw

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