



David H. Corlett  
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May 30, 2012  
Serial: HNP-12-065

10 CFR 50.46

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Shearon Harris Nuclear Power Plant, Unit 1  
Docket No. 50-400 / Renewed Facility Operating License No. NPF-63

Subject: 10 CFR 50.46 Annual Report of Changes to LOCA Analyses

Ladies and Gentlemen:

In accordance with 10 CFR 50.46(a)(3)(ii), Carolina Power & Light Company, doing business as Progress Energy Carolinas, Inc., hereby submits the annual report of changes to and errors discovered in the Loss of Coolant Accident (LOCA) analyses for the Shearon Harris Nuclear Power Plant, Unit 1 (HNP) for the period May 23, 2011, through May 22, 2012.

The previous HNP 10 CFR 50.46 annual report to the NRC, dated May 23, 2011 (Serial: HNP-11-046), documented a Small Break LOCA Peak Cladding Temperature (PCT) of 1594°F and a Large Break LOCA PCT of 2081°F. For this reporting period, there have been no errors or changes in the LOCA analyses and the results stand as previously reported. The 10 CFR 50.46 annual report is enclosed.

This document contains no regulatory commitments. Please refer any questions regarding this submittal to me at (919) 362-3137.

Sincerely,

A handwritten signature in blue ink that reads "John R. Carter for DHC".

Enclosure: 10 CFR 50.46 Annual Report of Changes to LOCA Analyses

cc: Mr. J. D. Austin, NRC Sr. Resident Inspector, HNP  
Ms. A. T. Billoch Colón, NRC Project Manager, HNP  
Mr. V. M. McCree, NRC Regional Administrator, Region II

HNP-12-065

Enclosure

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Docket No. 50-400 / Renewed Facility Operating License No. NPF-63

10 CFR 50.46 Annual Report of Changes to LOCA Analyses

Shearon Harris Nuclear Power Plant, Unit 1  
10 CFR 50.46 Annual Report of Changes to LOCA Analyses  
Reporting Period May 23, 2011, through May 22, 2012

**Small Break Loss of Coolant Accident (SBLOCA) Analysis Peak Cladding Temperature**

**Evaluation Model:** XN-NF-82-49(P)(A), Revision 1 Supplement 1, *Exxon Nuclear Company Evaluation Model Revised EXEM PWR Small Break Model*, Siemens Power Corporation, December 1994.

SBLOCA Peak Cladding Temperature (PCT) reported May 23, 2011	1594 °F
Changes during reporting period	None
Errors during reporting period	None
Total PCT change during reporting period	$\Sigma \Delta PCT = 0$ °F
End of Reporting Period SBLOCA PCT	1594 °F

**Large Break Loss of Coolant Accident (LBLOCA) Analysis Peak Cladding Temperature**

**Evaluation Model:** EMF-2087(P)(A), *SEM/PWR-98: ECCS Evaluation Model for PWR LBLOCA Applications*, Siemens Power Corporation, June 1999.

LBLOCA Peak Cladding Temperature reported May 23, 2011	2081 °F
Changes during reporting period	None
Errors during reporting period	None
Total PCT change during reporting period	$\Sigma \Delta PCT = 0$ °F
End of Reporting Period LBLOCA PCT	2081 °F