10 CFR 50.46(a)(3)(ii)

Progress Energy

Serial: RNP-RA/10-0118

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

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23

ANNUAL REPORT OF CHANGES TO OR ERRORS DISCOVERED
IN AN ACCEPTABLE LOSS-OF-COOLANT ACCIDENT EVALUATION
MODEL APPLICATION FOR THE EMERGENCY CORE COOLING SYSTEM

Ladies and Gentlemen:

In accordance with the provisions of the Code of Federal Regulations, Title 10, Part 50.46 (10 CFR 50.46), Carolina Power and Light Company, also known as Progress Energy Carolinas, Inc., is submitting the attached report of non-significant changes to and errors discovered in an acceptable Loss-of-Coolant Accident (LOCA) evaluation model (EM) for the Emergency Core Cooling System at the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2. The applicable LOCA EMs are referenced in the HBRSEP, Unit No. 2, Core Operating Limits Report. This submittal satisfies the 10 CFR 50.46(a)(3)(ii) requirement for annual reporting of LOCA EM changes for HBRSEP, Unit No. 2.

The last annual report was submitted to the Nuclear Regulatory Commission by letter dated November 24, 2009, covering changes through November 5, 2009. This annual report provides the changes covering the period of November 5, 2009 through November 8, 2010. The non-significant changes and error corrections are provided in Attachment I. The effects of these non-significant changes and error corrections on HBRSEP, Unit No. 2, peak cladding temperature (PCT) estimates are also summarized in Attachment I.

The latest PCT estimates for the LBLOCA and SBLOCA are included in Attachment II.

If you have any questions concerning this matter, please contact me at (843) 857-1626.

Sincerely,

Curt Castell

Curt Castell
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NRR

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Attachments:

I. Report of Changes/Errors in Loss-of-Coolant Accident Evaluation Models for the Emergency Core Cooling System
II. Peak Cladding Temperature Estimates

c: L. A. Reyes, NRC, Region II
B. Mozafari, NRC Project Manager, NRR
NRC Resident Inspector, HBRSEP

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

REPORT OF CHANGES/ERRORS IN LOSS-OF-COOLANT ACCIDENT EVALUATION MODELS FOR THE EMERGENCY CORE COOLING SYSTEM

This report provides an estimate of the effect on peak cladding temperature (PCT) of changes and error corrections in the Loss-of-Coolant Accident (LOCA) evaluation models (EMs) and EM applications for the Emergency Core Cooling System (ECCS) at the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, covering the period of November 5, 2009 through November 8, 2010.

Large Break Loss-of-Coolant Accident (LBLOCA) Evaluation Model

CHANGED CONDITION	PCT IMPACT (°F)
6/22/10 – Corrected an error where the analysis did not entrain an appropriate amount of liquid water into the steam generator tubes. This was due to an invalid setting on the S-RELAP "FIJ" multiplier.	-4
Cumulative Impact	-4

Small Break Loss-of-Coolant Accident (SBLOCA) Evaluation Model

CHANGED CONDITION	PCT IMPACT (°F)
No changes or errors	0
Cumulative Impact	0

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PEAK CLADDING TEMPERATURE ESTIMATES

The current peak cladding temperature (PCT) estimates associated with Loss-of-Coolant Accident (LOCA) Emergency Core Cooling System (ECCS) evaluation models are listed below. These estimates include the cumulative effects of significant and non-significant error corrections and evaluation model changes through November 8, 2010.

Event	PCT (°F)
Large Break LOCA, ECCS Injection Mode	1820
Small Break LOCA, ECCS Injection Mode	1615