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

Serial: RNP-RA/13-0123

NOV 2 1 2013 United States Nuclear Regulatory Commission Attn: Document Control Desk

Washington, DC 20555-0001

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

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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), Duke Energy Progress, Inc., formerly known as Carolina Power and Light Company, hereby submits 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 December 4, 2012 (ML12348A011). This annual report provides the changes covering the period of November 07, 2012 through October 24, 2013. The non-significant changes and error corrections are provided in Attachment I. The latest peak cladding temperature (PCT) estimates for the Large Break (LB) LOCA and Small Break (SB) LOCA are included in Attachment II.

There are no commitments associated with this letter.

If you have any questions concerning this matter, please contact Richard Hightower at (843) 857-1329

Sincerely, Sincerely, Sincerely, Sharon A. Wheeler-Peavyhouse Manager – Support Services SWP/msc

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Attachments

Report of Changes/Errors in Loss-of-Coolant Accident Evaluation 1. Models for the Emergency Core Cooling System Peak Cladding Temperature Estimates

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V. MCCree, NRC, Region II NRC Resident Inspector, HBRSEP S. Lingam, NRR

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

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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 7, 2012 through October 24, 2013.

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

CHANGED CONDITION	PCT IMPACT (°F)			
Incorrect use of Cathcart-Pawel correlation	0			
Error in RODEX3a computer code	-10			
Cumulative impact	-10			

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

CHANGED CONDITION	PCT IMPACT (°F)		
Input error in the pressurizer heater cutoff level	0		
Cumulative Impact	0		

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

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 October 24, 2013.

Even						i, i	<u>PCT (°F)</u>
Large	Break LOCA,	ECCS	Injection	Mode			2088
Small	Break LOCA,	ECCS	Injection	Mode			1507