ACCELERATED DOCUMENT DISTRIBUTION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9303100251 DOC.DATE: 93/03/04 NOTARIZED: NO DOCKET #
FACIL:50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light C 05000261
AUTH.NAME AUTHOR AFFILIATION
MCCARTHY,D.C. Carolina Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Forwards 30-day rept per 10CFR50.46(a)(3)(ii) re small break LOCA & estimated effect of changes or errors in ECCS evaluation models or in application of models.

DISTRIBUTION CODE: A001D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 5
TITLE: OR Submittal: General Distribution

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD2-1 LA	1	1	PD2-1 PD	1	1
	MOZAFARI,B	2	2			
INTERNAL:	NRR/DE/EELB	1	1	NRR/DORS/OTSB	1	1
	NRR/DRCH/HICB	1	1	NRR/DSSA/SCSB	1	1
	NRR/DSSA/SPLB	1	1	NRR/DSSA/SRXB	1	1
	NUDOCS-ABSTRACT	1	1	OC/LFMB	1	0
	OGC/HDS2	1	0	REG FILE 01	1	1
EXTERNAL:	NRC PDR	1	1	NSIC	1	1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 504-2065) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 16 ENCL 14

R I D S / A D D S

R I D S / A D D S

CP&L

Carolina Power & Light Company

MAR 04 1993

SERIAL: NLS-93-070
10 CFR 50.46

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

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

THIRTY-DAY REPORT PURSUANT TO 10 CFR 50.46 - SMALL BREAK LOCA

Gentlemen:

The purpose of this letter is to provide a 30-day report pursuant to 10 CFR 50.46(a)(3)(ii) for the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR2) regarding the estimated effect of changes or errors in Emergency Core Cooling System (ECCS) evaluation models or in the application of the models. The enclosure to this letter provides Margin Utilization Tables, which show the effects of permanent assessment of peak clad temperature (PCT) margin for the small break loss-of-coolant accident (SBLOCA) analysis of record.

Prior to this report, the SBLOCA analysis PCT for HBR2 was 2108°F for a 1.5" break size and 1992°F for a 2" break size. The PCTs reported herein are 1826°F and 1923°F for the 1.5" and 2" breaks, respectively. Since the analysis was performed, several errors, such as the NOTRUMP Code Solution Convergence, have been identified in the Westinghouse SBLOCA Evaluation Model. In addition to the NOTRUMP Solution Convergence issue, several analysis input errors, or errors in the application of the Evaluation Model, were discovered. To assess the effect of these errors on the analysis PCT, a reanalysis was recently performed for HBR2 with these errors corrected. Examples of the errors in the application of the evaluation model include the correction of the crossover leg flow area and the lower core plate flow area. Although the effect of each individual correction cannot be precisely determined, the issue correction which caused the largest change in PCT is judged to be the NOTRUMP Code Solution Convergence issue. As a result of the reanalysis, the limiting break size shifted from a 1.5" to a 2" break. In order to correctly account for these modifications to the analysis of record PCT under the requirements of 10 CFR 50.46, two PCT margin assessments summary sheets are enclosed, reflecting changes to the results of both the 1.5" and 2" break cases.

Please note that in May 1993, HBR2 will begin operating under a SBLOCA analysis using Siemens methodology. The issues addressed in this report will become moot at that time, and no subsequent reanalysis with the Westinghouse SBLOCA methodology is currently planned.

A001

090109

411 Fayetteville Street • P. O. Box 1551 • Raleigh, N. C. 27602

(1948RNP)

Questions regarding this matter may be referred to Mr. R. W. Prunty at (919) 546-7318.

Yours very truly,

David C. McCarthy
Manager
Nuclear Licensing Section

JSK/jbw

Enclosure

cc: Mr. S. D. Ebneter
Mr. L. W. Garner
Ms. B. L. Mozafari

SMALL BREAK LOCA PEAK CLAD TEMPERATURE MARGIN UTILIZATION

Plant Name: H. B. Robinson, Unit No. 2 **Eval. Model:** NOTRUMP **Fuel:** Siemens
Utility Name: Carolina Power & Light **Fq = 2.32** **FΔH = 1.65** **SGTP = 5%**
Break Size= 1.5"

	Clad Temperature	Notes
A. Analysis of Record (5/88)	PCT = 2004°F	
B. Prior Permanent ECCS Model Assessments	ΔPCT = 114°F	
C. 10 CFR 50.59 Safety Evaluations (Table A)	ΔPCT = -10°F	
D. 1992 10 CFR 50.46 Model Assessments (Permanent Assessment of PCT Margin)		
1. New Analysis Margin	ΔPCT = -282°F	(1)
E. Other Margin Allocations None		
Licensing Basis PCT + Margin Allocations	PCT = 1826°F	

Note:

1. New runs were made which corrected several errors in the SBLOCA analysis. The limiting break size is now 2".

SMALL BREAK LOCA PEAK CLAD TEMPERATURE MARGIN UTILIZATION

Plant Name: H. B. Robinson, Unit No. 2 **Eval. Model: NOTRUMP** **Fuel: Siemens**
Utility Name: Carolina Power & Light **Fq = 2.32** **FΔH = 1.65** **SGTP = 5%**
Break Size = 2"

	Clad Temperature	Notes
A. Analysis of Record (5/88)	PCT = 1888°F	
B. Prior Permanent ECCS Model Assessments	ΔPCT = 114°F	
C. 10 CFR 50.59 Safety Evaluations (Table A)	ΔPCT = -10°F	
D. 1992 10 CFR 50.46 Model Assessments (Permanent Assessment of PCT Margin)		
1. New Analysis Margin	ΔPCT = -69°F	(1)
E. Other Margin Allocations None		
Licensing Basis PCT + Margin Allocations	PCT = 1923°F	

Note:

1. New runs were made which corrected several errors in the SBLOCA analysis. The limiting break size is now 2".

TABLE A
10 CFR 50.59 SAFETY EVALUATIONS

Plant Name: H. B. Robinson, Unit No. 2
Utility Name: Carolina Power & Light Company

I. Small Break LOCA ECCS Safety Evaluations	**Clad Temperature**
A. AFW Enthalpy Delay Time Increase	ΔPCT = -10°F
Total 10 CFR 50.59 Small Break LOCA Assessments	ΔPCT = -10°F