

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8403210116 DOC. DATE: 84/03/12 NOTARIZED: NO DOCKET #
 FACIL: 50-261 H. B. Robinson Plant, Unit 2, Carolina Power and Light 05000261
 AUTH. NAME AUTHOR AFFILIATION
 ZIMMERMAN, S. R. Carolina Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 VARGA, S. A. Operating Reactors Branch 1

SUBJECT: Forwards addl info re power distributions as part of
 pressurized thermal shock program to effect flux reduction,
 per 830930 submittal, in response to 840301 telcon.

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 TITLE: OR Submittal: Thermal Shock to Reactor Vessel

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	NRR VISSING, G04	1	1	NRR	DE/MTEB	1	1
	NRR/DHFS DIR	1	1	NRR	DL DIR	1	1
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	NRR/DSI/RSB	1	1	NRR	DST DIR	1	1
	NRR/DST/GIB	1	1	<u>REG FILE</u>	05	1	1
	RES/DET	1	1	RES	DRA	1	1
	RGN2	1	1	RGN1	ADMSTR	1	1
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Carolina Power & Light Company
MAR 12 1984

SERIAL: NLS-84-115

Director of Nuclear Reactor Regulation
Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing
United States Nuclear Regulatory Commission
Washington, DC 20555

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

Dear Mr. Varga:

On March 1, 1984 a phone conversation was held between Carolina Power & Light Company, your staff, and Brookhaven National Laboratory (BNL) to discuss our submittal of September 30, 1983 concerning flux reduction at H. B. Robinson. During that phone call, additional information was requested concerning H. B. Robinson power distributions. That additional information is attached to this letter and was telecopied to BNL on March 5, 1984.

If you have any additional questions on this matter, please do not hesitate to contact our licensing staff.

Yours very truly,

S. R. Zimmerman
Manager
Nuclear Licensing Section

SRZ/JJS/lcv (9676JJS)

cc: Mr. J. P. O'Reilly (NRC-RII)
Mr. G. Requa (NRC)
Mr. Steve Weise (NRC-HBR)
Mr. L. Lois (NRC)
Mr. R. Woods (NRC)

8403210116 840312
PDR ADDCK 05000261
PDR

A049
11



Carolina Power & Light Company

INCORPORATION ANALYSIS UNIT

ENGINEERING CALCULATION

(COMPUTER INPUT)

PREPARED BY: K. Cantrell

DATE: 3/6/84 WKC

PAGE NO.

CHECKED BY: K. Karcher

DATE: 3/6/84 KKC

OF

SUBJECT:

XTG HBR2 CYC8 Average Powers Based On Radial Delta Exposures

COMPUTER PROGRAM:

XTG

VERSION:

PWR

PRODUCTION
DEVELOPMENT

TAPE NO. OR FILE NAME:

REACTOR:

HBR2

CYCLE:

8

EXPOSURE:

STATE:

	H	G	F	E	D	C	B	A
8	1 .680 .734 -.056	2 1.054 1.083 -.029	3 .944 .986 -.042	4 .933 .965 -.032	5 1.166 1.156 .010	6 1.141 1.105 .036	7 .939 .918 .021	8 .846 .815 .031
9	9	10 .934 .980 -.046	11 1.148 1.163 -.015	12 .992 1.020 -.028	13 1.183 1.172 .011	14 .964 .972 -.008	15 1.210 1.166 .044	16 .709 .681 .028
10	17	18	19 .963 .995 -.032	20 1.174 1.172 .002	21 .981 1.001 -.020	22 1.099 1.080 .019	23 1.028 1.015 .013	
11	24	25	26	27 1.088 1.098 -.010	28 .946 .962 -.016	29 1.173 1.146 .027	30 .733 .726 .007	
12	31	32	33	34	35 .921 .923 -.002	36 .743 .746 -.003	37 PDQ XTG Difference	
13	37	38	39	40	41			
14	42	43	44	45				
15	46	47						



INCORE ANALYSIS UNIT

ENGINEERING CALCULATION
(COMPUTER INPUT)

PREPARED BY: K. Cantrell

DATE: 3/5/84 WKC

PAGE NO.

CHECKED BY: K. Karcher

DATE: 3/5/84 KEK

OF

SUBJECT:

XTG HBR2 CYC10 Average Relative Powers Based on Radial Delta Exposures

COMPUTER PROGRAM: XTG	VERSION: PWR	PRODUCTION DEVELOPMENT <input checked="" type="checkbox"/>	TAPE NO. OR FILE NAME:
REACTOR: HBR2	CYCLE: 10	EXPOSURE:	STATE: Based on 36" PLSA Shield Height

	H	G	F	E	D	C	B	A	
8	1 1.341 1.322 .019	2 1.165 1.154 .011	3 .983 .989 -.006	4 1.346 1.301 .045	5 1.028 1.032 -.005	6 1.202 1.171 .031	7 1.193 1.170 .017	8 .328 .358 -.030	46
9	9	10 1.166 1.154 .011	11 1.148 1.129 .019	12 1.021 1.028 -.007	13 1.225 1.205 .020	14 1.189 1.163 .026	15 1.120 1.119 .001	16 .263 .294 -.031	47
10	17	18	19 .984 .998 -.014	20 1.338 1.297 .041	21 1.024 1.026 -.002	22 .987 .987 .0	23 .934 .993 -.059	24	44
11	24	25	26	27 .997 1.007 -.010	28 1.153 1.145 .008	29 1.111 1.107 .004	30 .719 .745 -.026	31	45
12	31	32	33	34	35 1.083 1.081 .002	36 .488 .514 -.026	37	41	
13	37	38	39	40	41				
14	42	43	44	45					
15	46	47							

PDQ*
XTG
Difference

*PDQ = .75 Top + .25 Bottom