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FROM: Carolina Power & Light Company Raleigh, N.C. 27602 E.E. Utley		DATE OF DOC 11-19-74	DATE REC'D 11-22-74	LTR X	TWX	RPT	OTHER
TO: E. Case		ORIG 3 signed	CC 37	OTHER	SENT AEC PDR <u>XX</u>		
					SENT LOCAL PDR <u>XX</u>		
CLASS	UNCLASS XXXX	PROP INFO	INPUT	NO CYS REC'D 40	DOCKET NO: 50-261		

DESCRIPTION: Ltr re our 10-10-73 request... ENCLOSURES:  
furnishing addl info re ATWT..... & trans:  
Attachment I.....

PLANT NAME: H.B. Robinson Unit 2

**ACKNOWLEDGE**

**Do Not Remove**

**FOR ACTION/INFORMATION**

DHL 11-23-74

BUTLER (L)	SCHWENCER (L)	ZIEMANN (L)	REGAN (E)
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✓ AEC PDR		GRIMES		BRAITMAN
OGC, ROOM P-506A	SCHROEDER	GAMMILL	DIGGS (L)	SALTZMAN
MUNTZING/STAFF	MACCARY	KASTNER	GEARIN (L)	B. HURT
CASE	KNIGHT	BALLARD	GOULBOURNE (L)	
GIAMBUSSO	PAWLICKI	SPANGLER	KREUTZER (E)	<b>PLANS</b>
BOYD	SHAO		LEE (L)	MCDONALD
✓ MOORE (L) (BWR)	✓ STELLO	<b>ENVIRO</b>	MAIGRET (L)	CHAPMAN
DEYOUNG (L) (PWR)	HOUSTON	MULLER	REED (E)	DUBE w/input
SKOVHOLT (L)	NOVAK	DICKER	SERVICE (L)	E. COUPE
GOLLER (L)	ROSS	KNIGHTON	SHEPPARD (L)	
P. COLLINS	IPPOLITO	YOUNGBLOOD	SLATER (E)	D. THOMPSON (2)
DENISE	TEDESCO	REGAN	SMITH (L)	✓ KLECKER
✓ REG OPR	LONG	PROJECT LDR	✓ TEETS (L)	✓ EISENHUT
✓ FILE & REGION (3)	LAINAS		WILLIAMS (E)	
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*mes Jc*

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1 - ASLB	1 - B&M SWINEBROAD, Rm E-201 GT	1 - AGMED (RUTH GUSSMAN)
1 - Newton Anderson	1 - CONSULTANTS	Rm B-127 GT
✓ 6 - ACRS	1 - NEWMARK/BLUME/AGBABIAN	1 - R. D. MUELLER, Rm E-201 GT
SENT TO LIC. ASST. S. TEETS		
11-23-74		



Carolina Power & Light Company

November 19, 1974

Regulatory

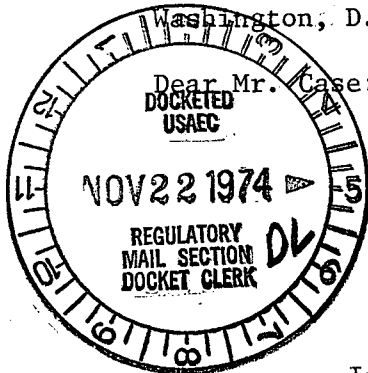
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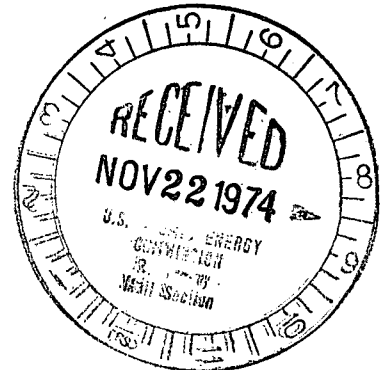
Mr. Edson G. Case, Acting Director  
Directorate of Licensing  
Office of Regulation  
U. S. Atomic Energy Commission  
Washington, D. C. 20545

50-261



Dear Mr. Case:  
DOCKETED  
USAEC

H. B. ROBINSON UNIT NO. 2  
LICENSE DPR-23  
ANTICIPATED TRANSIENTS WITHOUT TRIP



In response to your request of October 10, 1973, and in compliance with the recommendation of WASH-1270, Section I-C and II-C of Appendix A, Carolina Power and Light Company wishes to advise the Commission that we are referencing the Westinghouse topical report, WCAP-8404, "Anticipated Transient Without Trip Analysis for Westinghouse PWR's with 44 Series Steam Generators," as the applicable analysis for the H. B. Robinson Unit No. 2 Plant. We have reviewed the subject report and have determined that the models contained therein and the parameters used in the analyses suitably bound the Robinson Plant.

Attachment I tabulates the parameters for the Robinson Plant which are of importance in the analyses. A comparison of these parameters with those of WCAP-8404, relative to this individual transients, demonstrates the applicability of the analyses to the Robinson Plant. The three-loop plant model used in the analyses of WCAP-8404 has the same core thermal power as the Robinson Plant in its intended uprated condition. The differences in values for steam capacity of power operated relief valves and safety valves, feedwater temperature, and auxiliary feedwater purge volume, for example, are all conservative with respect to the analyses, leading to lower peak reactor coolant system pressures and greater margin to DNB. Other differences have no significant effect on the analyses.

In addition to analyses of the plant to demonstrate the consequences of an ATWT, WASH-1270 recommends that a review of the reactor protection system be performed, providing an analysis of the system reliability from the standpoint of random and common mode failure. These analyses have been performed for the reactor protection system employed by Westinghouse in the H. B. Robinson Plant and documented in WCAP-7486, "An Evaluation of Anticipated Operational Transients in Westinghouse Pressurized Water Reactors."

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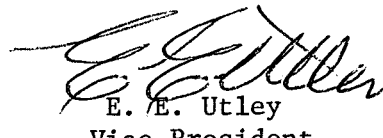
Mr. Edson G. Case

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It is our conclusion that the analyses presented in WCAP-8404, plus the review of the protection system in WCAP-7486, satisfy the requirement stated in your letter of October 10, 1973, and that it is adequately demonstrated in these references that no hardware modifications are required to mitigate the consequences of ATWT in the H. B. Robinson Plant.

Yours very truly,

  
E. E. Utley  
Vice President  
Bulk Power Supply

DBW:cg

Attachment

cc: Messrs. N. B. Bessac  
T. E. Bowman  
W. B. Howell  
J. B. McGirt  
D. V. Menscer  
D. B. Waters

## ATTACHMENT I

Received w/ Ltr Dated 11-19-74

<u>Parameter</u>	<u>WCAP-8404 Model</u>	<u>H. B. Rob. Unit No. 2</u>
Stm. Gen. Type	44 Series	44 Series
No. of Loops	3 Loop	3 Loop
Core Power (Mwt)	2300	2300
Nominal Pressurizer Pressure (psia)	2250	2250
Nominal Coolant Flow (gpm)	268500	268500
Nominal Average Coolant Temp. (°F)	575.5	575.45
Nominal Coolant No-load Temp. (°F)	547	547
Total RCS Volume Including Pressurizer (F+ <sup>3</sup> )	9072	9268.3
Pressurizer Volume (F+ <sup>3</sup> )	1300	1300
Number of power operator Relief Valves	2	2
Stm. Capacity of each Power Operated Relief Valves @ 2350 psia (lbs/hr)	179000	210000
Number of Safety Valve	3	3
Stm. Capacity of Each Safety Valve	288000 @ 2500 psia	29836.8 @ 2590 psia
Best Estimate Rod Worth of Bank D at its Full Power Insertion Limit (% k/k)	0.3	0.3
Stm. Gen. Design Pressure (psia)	1100	1100
Nominal Total Stm. Flow (lb/sec)	2832	2796.9
Nominal Feedwater Temp. (°F)	446.6	<441.2
Nominal Fluid Mass in Stm. Gen. (lb)	238500	238470
Auxiliary Feedwater Temp. (°F)	130	<130
Auxiliary Feedwater Available (gal)	140000	200000 + Lake
Capacity of Auxiliary Feedwater (gpm)	1200	1200
Vol. of Line Between Aux. Feedwater Connection on Feedline and Stm. Gen. Inlet, Total for all Loops (ft <sup>3</sup> )	500	235