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Georgia Power
the southern electric system

J. T. Beckham, Jr.
Vice President and General Manager
Nuclear Generation

April 5, 1982

U. S. Nuclear Regulatory Commission
Operating Reactor Branch #4
Division of Licensing
Washington, D. C. 20555

ATTENTION: Mr. John F. Stolz

NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR-57, NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNITS 1, 2
RESPONSE TO CONTAINMENT SYSTEMS BRANCH REQUEST FOR ADDITIONAL INFORMATION ON MAIN STEAM LINE BREAK

Gentlemen:

The following is submitted in response to your letter of February 25, 1982 which requested additional information regarding peak containment temperatures for equipment qualification purposes at Plant Hatch. The letter requested Georgia Power Company (GPC) to perform and submit main steam line break analyses for multiple break sizes since the NRC staff had determined that this type of accident was limiting for peak containment temperatures. A small line break (SLB) analysis in high energy piping for Plant Hatch was performed. Based upon the results of this analysis, we conclude that the design basis accident (DBA) analyses in the FSARs bound the SLB analysis with regard to drywell peak temperature.

The Plant Hatch unique drywell temperature SLB analysis examined a spectrum of three break sizes (.01, 0.1, 0.5 ft^2) in high energy lines to determine the maximum drywell temperature. The 0.5 ft^2 break results in rapid vessel depressurization and produces the highest drywell peak temperature of the three break sizes, which is 274^oF.

The GE SLB analysis was performed in compliance with NUREG-0588 (except for the manner in which heat sink condensate is treated and the assumption of a homogeneous air/steam mixture in the drywell). The assumptions made during the course of the analysis are summarized in Attachment 2.

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Page Two

The drywell peak temperatures obtained by the DBA analyses in the HNP-FSARs for Units 1 and 2 are conservative and the assumptions documented by GE have been approved by the NRC (NUREG-0661). As shown in Attachment 1, the peak drywell temperature for each SLB case is lower than the FSAR DBA temperatures of 289°F for Unit 1 and 304°F for Unit 2. This confirms that the original drywell temperature analyses contained in the HNP-FSARs are bounding for peak temperatures for equipment qualification purposes.

J. T. Beckham, Jr. states that he is Vice President of Georgia Power Company and is authorized to execute this oath on behalf of Georgia Power Company, and that to the best of his knowledge and belief the facts set forth in this letter are true.

GEORGIA POWER COMPANY

By: J. T. Beckham, Jr.

Sworn to and subscribed before me this 5th day of April, 1982

Notary Public

Notary Public, Georgia, State at Large
My Commission Expires July 26, 1985

CS/mb

Enclosures

xc: M. Manry
R. F. Rogers, III
J. P. O'Reilly (NRC-Region II)

ATTACHMENT 1

SUMMARY OF SLB VERSUS DBA ANALYSIS RESULTS

Break Size (ft^2)	Time to Maximum Temperature (sec)	Maximum Temperature (^oF)
.01	676	213.4
.1	623	262.6
.5	7.7	274.3
HNP-2 FSAR-DBA	Approx. 8	304.0
HNP-1 FSAR-DBA	Approx. 8	289.0

ATTACHMENT 2

MAJOR INPUT SLB ANALYSIS ASSUMPTIONS

Scram:	At time zero
MSIV Closure:	At 3.5 seconds
ECCS Systems:	HPCI plus 1 core spray pump
Feedwater flow:	Coastdown to zero in 7 sec.
Auto depressurization System:	Actuated at 10 min.
RHR pool cooling:	1 loop initiated at 10 min.
Initial suppression pool temp:	$95^{O}F$
Initial reactor power:	102% of rated
Initial drywell relative humidity:	20%
Initial drywell temperature:	$135^{O}F$
Drywell steel liner:	
Surface area:	$15842\ ft^2$
Heat capacity	90108 $BTU/^{O}F$