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 FACIL:50-261 H. B. Robinson Plant, Unit 2, Carolina Power and Light 05000261  
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 HOWE,P.W. Carolina Power & Light Co.  
 RECIP.NAME RECIPIENT AFFILIATION  
 EISENHUT,D.G. Division of Licensing

SUBJECT: Forwards results of util & consultant evaluations re  
 NUREG-0737, Item II.D.1, "Relief & safety Valve Test  
 Requirements." Final plant-specific evaluations will be  
 completed consistent w/response to Generic Ltr 82-10.

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 TITLE: Response to NUREG -0737/NUREG-0660 TMI Action Plan Rgmts (OL's)

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Carolina Power & Light Company

JUN 01 1982

Mr. Darrell G. Eisenhut, Director  
Division of Licensing  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261  
LICENSE NO. DPR-23  
NUREG-0737, ITEM II.D.1  
"RELIEF AND SAFETY VALVE TEST REQUIREMENTS"

Dear Mr. Eisenhut:

NUREG-0737, Item II.D.1, "Relief and Safety Valve Test Requirements", as revised by your letter of September 29, 1981, requires that Carolina Power & Light Company (CP&L) provide a preliminary review of the generic testing program results to determine the adequacy of the H. B. Robinson Steam Electric Plant (HBR) relief and and safety valves, by April 1, 1982. In a letter dated March 30, 1982 we informed you that applicable reports on the EPRI PWR Safety and Relief Valve Test Program would be delayed and that we would not be able to submit our preliminary evaluation until June 1, 1982. The enclosure to this letter represents the combined evaluation results of the CP&L staff and its consultant. The final plant specific evaluations have been initiated and will be completed on a schedule consistent with our response to Generic Letter 82-10.

If you have any questions regarding this matter, please contact our staff.

Yours very truly,

P. W. Howe  
Vice President  
Technical Services

DCW/lr (n-72)  
Enclosure

cc: Mr. J. P. O'Reilly (NRC-RII)  
Mr. G. Requa (NRC-ONRR)

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## ENCLOSURE

### PWR SAFETY AND RELIEF VALVE TEST PROGRAM

The Carolina Power & Light Company (CP&L) is actively pursuing resolution of the pressurizer safety and relief valve issue through direct participation in the Electric Power Research Institute (EPRI) valve test program.

The primary objective of the Test Program is to provide full scale test data confirming the functionability of the primary system power operated relief valves and safety valves for expected operating and accident conditions. The second objective of the program is to obtain sufficient thermal hydraulic load data for the pressurizer piping to permit confirmation of models which may be utilized for plant unique analysis of safety and relief valve discharge piping systems. Relief valve tests were completed in August, 1981 and safety valve tests were completed in December, 1981. The reports prepared for the EPRI Test Program and referenced in this submittal include:

(1) "Valve Selection/Justification Report"

This report documents that the selected test valves represent all participating PWR safety and relief valves.

(2) "Test Condition Justification Report"

This report documents the basis and justification of the valve test conditions for all participating PWR plants.

(3) "Valve Inlet Fluid Conditions for Pressurizer  
Safety and Relief Valves in Westinghouse Designed Plants"

(Same as (2), above).

(4) "Safety and Relief Valve Test Report"

This report provides evidence demonstrating the functionability of the selected test valves under the selected test conditions for all participating PWR plants.

All of these documents have been received by CP&L. Additionally, they have been transmitted to NRC by Mr. David Hoffman of the Consumers' Power Company on behalf of the participating PWR Utilities.

CP&L and its consultant have undertaken the evaluation of the referenced documents, and the preliminary results of that evaluation are presented below.

### Power Operated Relief Valves (PORV)

The PORV's at H. B. Robinson #2 are:

Manufacturer	- Copes-Vulcan
Model No.	- Globe, D-100-160
Size & Description	- 2" NPS, 17-4PH plug and cage
Quantity - 2	

These specific valves have not been tested by EPRI, however, relief valves similar in design and operation have been tested in a test configuration similar to that of the actual pressurizer configuration at HBR. Justification that the valves tested envelop the valves used at HBR is given in the Valve Justification Report, EPRI Report (1).

The fluid conditions for the PORV's are discussed in the Fluid Conditions Justification Report, EPRI Report (3). The fluid conditions for the tests were selected on the basis of enveloping those fluid conditions for all plants utilizing the same valve type.

Tests were performed both at the Marshall Steam Station and at the Wyle test facility (Phase III). A total of 20 tests were conducted utilizing steam, water, and steam-to-water transition fluid conditions. These tests confirmed that the valve opened and closed on demand and that the valve suffered no damage that would preclude future operation. Specific information related to these tests is given in Section 4.6 of the "Safety and Relief Valve Test Report", EPRI Report (4).

### Safety Valves

The safety valves at H. B. Robinson #2 are:

Manufacturer	- Crosby Valve and Gage
Model No.	- HB-BP-86
Size	- 4K26
Assembly No.	- 51249
Quantity	- 3

These specific valves have not been tested by EPRI. However, safety valves similar in design and operation have been tested in a test configuration similar to that of the actual pressurizer configuration at the plant. Justification that the valves tested envelop the valves at HBR is given in the Valve Justification Report, EPRI Report (1). Justification that the fluid conditions for the tests envelop the actual plant conditions is presented in EPRI Report (3).

The safety valves have been shown to open and close. However, certain areas of system performance are still undergoing review, specifically addressing the effect of the inlet piping and outlet piping on the safety valves. CP&L is actively involved with the Westinghouse Owners' Group generic program investigating this subject and has contracted with Westinghouse to aid in

evaluating the specific HBR PWR Safety and Relief Valve system, including downstream piping. All relevant EPRI results will be employed in the evaluation.

Based on our evaluation, we have determined that the valves tested envelop the range of expected operating and design accident conditions at HBR.