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L. V. MAURIN  
Vice President Nuclear Operations

December 29, 1982

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I.02.02  
L.09

Mr. Thomas M. Novak  
Assistant Director of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUBJECT: Waterford SES 3  
Docket No. 50-382  
NUREG-0737  
SER Confirmatory Issue  
Performance of PWR Relief and Safety Valves

The purpose of this letter is to provide the Louisiana Power & Light response to the SER confirmatory issue and the NRC request for a submittal that addressed the functionability of the pressurizer safety valves installed in the Waterford 3 system. Item II.D.1 of NUREG-0737 required that utilities operating and/or constructing Pressurized Water Reactor (PWR) power plants provide evidence, supported by test, of safety valve functionability. In response to these requirements, the Electric Power Research Institute (EPRI) implemented a generic test program on behalf of the PWR utilities. Louisiana Power & Light was a participant in the EPRI program. The results of the EPRI program were forwarded to the NRC on April 1, 1982.

Louisiana Power & Light, in conjunction with other utilities operating and constructing Combustion Engineering (CE) designed plants requested, through the CE Owners Group, that CE implement a program to evaluate and apply the EPRI test results. The results of the CE program, summarized in CEN-227, were forwarded to the NRC on December 20, 1982, in parallel with distribution to the participating utilities. This report, CEN-227, shows that the EPRI tests were directly representative of plant specific safety valve models and valve installations, and that acceptable valve operation was demonstrated.

Part B Section 3 details the approach used in the evaluation of test data. The safety valve used at Waterford 3 is the Dresser Safety Valve Model 31709NA with a "short inlet pipe configuration" which is discussed in Part B Section 5 of the Report. Part C Section 5 gives the detailed information specific to Waterford 3 and concludes that two combinations of valve adjusting ring settings result in satisfactory operation with blowdowns below the acceptable values identified for Waterford 3 in Appendix C-1.

In addition to the CE study, Louisiana Power & Light had Ebasco perform an evaluation of the adequacy of the pressurizer relief piping and its supports/restraints as required by NUREG-0737 Item II.D.1. This report, which is enclosed, presents the results of the analysis of the Waterford 3 pressurizer safety relief valve discharge piping following SRV actuation. The results of the stress analysis of the piping system using the hydraulic forcing functions

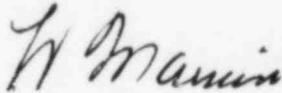
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generated with the computer code RELAP 5 are also presented in this report. RELAP 5 has been verified by comparison to experiments in the EPRI safety and relief valve program. The conclusion of the report justifies that all calculated stresses for the most severe load combination case are below allowable values.

The EPRI program, supplemented by the CE and Ebasco reports, show that the Waterford 3 safety valves and associated piping and supports are adequate and will function as required; furthermore, this information should serve to close-out the SER Confirmatory Item on this issue.

If you have any questions or comments, please advise.



L. V. Maurin

LVM/SMJ/pco

Enclosure

cc: J. Wilson, E. Blake, W. M. Stevenson

bcc: F. J. Drummond, R. P. Barkhurst, D. B. Lester, T. F. Gerrets,  
G. B. Rogers, R. W. Prados, C. J. Decareaux, R. F. Burski, P. V. Prasankumar,  
J. R. McGaha, S. A. Alleman, G. R. Peeler, T. K. Armington, K. R. Iyengar,  
M. I. Meyer, L. L. Bass, Richard Hymes, W. A. Cross, Z. A. Sabri,  
R. W. Kenning, R. A. Savoie, S. M. Jones, J. Hart (Ebasco), Central Records,  
Nuclear Records (2), Licensing Library

TO: R. Prados

REFERENCES: 1. Letter LW3-1306-82 dated 10/8/82  
2. Letter LW3-1595-82 dated 12/16/82

DATE: December 20, 1982

TASK DESCRIPTION: To perform a study to evaluate the adequacy of the pressurizer relief piping and its supports/restraints as required by NUREG 0737 Item II.D.1

DESCRIPTION BY: *W. J. Krotz* (originator) DATE: 12/20/82

RESPONSE REQUIRED: YES /  NO DATE RESPONSE DUE: \_\_\_\_\_  
Top Section filled out by Originator

VERIFICATION

I certify that I have performed a review of the task described, and as a result of this review I further certify that: (Choose one or both.)

- the present material status/conditions described above presently exist and that verification was made by direct observation on my part.
- the report, analysis, information, or action taken described above is in fact true and valid to the best of my knowledge and belief.

Signature: *W. J. Krotz* Date: 12/20/82

- Note: (1) Verification shall be performed by a First Line Supervisor, Engineer, Section or Department Head, or Manager.  
(2) The review is in accordance with LP&L procedures and is not a part of the Quality Assurance Program.

The actions taken to accomplish the task were as follows:  
(Provide specific details, use attachments as necessary). The hydraulic analysis of the Waterford SES Unit No. 3 pressurizer safety relief valve discharge piping following SRV actuation was performed using RELAP5 computer code. The stress analysis of the piping system using the hydraulic forcing functions was done using PIPESTRESS code.

Upon completion of the VERIFICATION STATEMENT this form is to accompany correspondence through the approval process. Once correspondence is approved, as applicable, distribution of this form shall be as follows: original to originator, copy to verifier, copy to file, other copies as necessary.