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RECIP.NAME RECIPIENT AFFILIATION
EISENHUT,D.G. Division of Licensing

SUBJECT: Forwards final response to requirements of NUREG-0737,Item II.D.1 of re PWR safety & relief valve test program. Conclusion & previous submittals support continued safe operation & NUREG requirement.

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FLORIDA POWER & LIGHT COMPANY

December 30, 1982
L-82-564

Office of Nuclear Reactor Regulation
Attention: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Eisenhut:

Re: St. Lucie Unit 1
Docket No. 50-335
Post-TMI Requirements
PWR Relief and Safety Valve Testing

The purpose of this letter is to provide you with Florida Power & Light Company's final response to the requirements of Item II.D.1 of NUREG-0737 concerning the PWR Safety and Relief Valve Test Program. Attachment 1 contains the results of our evaluation of the operability of the St. Lucie Unit 1 pressurizer safety valves. Attachment 2 contains the results of the evaluation of the pressurizer safety and relief valve piping for St. Lucie Unit 1. The conclusions reached in the attachments to this letter and in our previous submittals of April 1, 1982, July 9, 1982, and August 13, 1982, support the continued safe operation of St. Lucie Unit 1 and satisfies Florida Power & Light Company's responsibility to address the NRC concerns contained in Item II.D.1 of NUREG-0737.

Very truly yours,

Robert E. Uhrig
Vice President
Advanced System and Technology

REU/PKG/js

Attachment

cc: Mr. James P. O'Reilly, Region II
Harold F. Reis, Esquire
PNS-LI-82-529

A046

ATTACHMENT 1

SAFETY VALVE OPERABILITY

In order to facilitate an expeditious evaluation of the test data, the utilities operating and constructing Combustion Engineering (CE) designed plants have, through the CE Owners Group, requested that CE implement a program to evaluate and apply the EPRI test results. The CE Owners Group program was subsequently initiated in April, 1982 and completed in December, 1982. Florida Power and Light is a participant in this program.

The approach being applied by the CE Owners Group is to show that particular EPRI tests were directly representative of plant-specific safety valve models and valve installations, and that acceptable valve operation was demonstrated. Accordingly, CE report CEN-227, entitled "Summary Report on the Operability of Pressurizer Safety Valves in CE Designed Plants", is being forwarded separately to the NRC by Mr. Rik W. Wells, Chairman of the CE Owners Group. Florida Power and Light considers report CEN-227 to provide the required information on safety valve operability for St. Lucie Unit #1.

Based on CEN-227 there are three combinations of valve adjusting ring settings, demonstrated by EPRI Test results, that result in satisfactory operation. The ring settings are (-45,-14), (-55,-14), and (-95,-14). The ring settings[1] at St. Lucie Unit #1 are (-72,-14), (-82,-14), (-60,-14) and (-61,-14)*. Since these ring settings are bounded by the former, Florida Power and Light concludes that the present ring settings will result in satisfactory safety valve operability. This satisfies Florida Power and Light Company's responsibility to demonstrate safety valve operability in response to NUREG-0737.

* Spare Valve

Note 1. These ring settings are relative to the level position in order to be directly comparable to the CE ring settings. See CEN-227 paragraph 2.1.2 for a more detailed description of terms.

ATTACHMENT 2

SAFETY AND RELIEF VALVE PIPING

Ebasco Service has performed analyses on the safety and relief valve piping at St. Lucie Unit #1 to evaluate the adequacy of the piping and supports. A model was generated from piping isometrics which was used as input to the EPRI developed RELAP5 computer code. Thermal-hydraulic properties were then calculated by RELAP5 to be input into the postprocessor code CALPLOTFIII, developed by Ebasco for the development of the appropriate forcing functions and time histories. These forcing functions were generated from analysis of the following scenarios of valve actuation:

a. Two PORV's open simultaneously, SRV's closed.
b. PORV's do not open. All three SRV's open simultaneously.
c. PORVs open Pressurizer pressure continues to increase and SRVs open simultaneously.

Valve opening times were selected from the data tabulated in the EPRI Interim Test Report from valve tests representative of the St. Lucie Unit #1 valves and piping configuration. The results of the present analyses were then compared with prior analyses which had resulted in the present design. Based on the results of this evaluation it is concluded that the St. Lucie Unit #1 Safety and Relief Valve piping and supports are adequate for the presently calculated hydraulic loads. This satisfies Florida Power & Light responsibility to demonstrate adequacy of the St. Lucie Unit #1 Safety and Relief Valve Piping and Supports.