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VARGA,S.A. Operating Reactors Branch 1

SUBJECT: Forwards response to 820409 request for addl info re seismic qualification of auxiliary feedwater sys.

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FLORIDA POWER & LIGHT COMPANY

May 25, 1982
L-82-220

Office of Nuclear Reactor Regulation
Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Varga:

Re: Turkey Point Units 3 & 4
Docket Nos. 50-250 and 50-251
Seismic Qualification of
Auxiliary Feedwater System

Attached is the Florida Power & Light Company response to your request for additional information contained in your letter of April 9, 1982 concerning seismic qualification of the Auxiliary Feedwater System at Turkey Point Units 3 and 4. We trust that this additional information will aid you in the completion of your review.

Very truly yours,

J. A. De Mastry
for

Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/PKG/mbd

cc: J.P. O'Reilly, Region II
Harold F. Reis, Esquire

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ATTACHMENT

TURKEY POINT UNITS 3 & 4
SEISMIC QUALIFICATION OF THE AUXILIARY FEEDWATER SYSTEM
RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION

QUESTION 1

Clarify the extent to which your AFW system boundary, considered in your September 18, 1981 response letter, coincides with the boundary defined in Generic Letter 81-14. Generic Letter 81-14 defined the AFW system to be considered as:

(a) "The AFW system boundary from suction to discharge (including the water source and heat sink) shall include those portions of the system required to accomplish the AFW system function and connected branch piping up to and including the second valve which is normally closed or capable of automatic closure when the safety function is required".

RESPONSE: The boundary considered in our September 18, 1981 response (L-81-405) coincides with the criteria specified in Generic Letter 81-14 except as listed below:

(1) The AFW boundary on branch piping was considered to be the first isolation valve either normally closed or capable of automatic closure as stated on Page 5 of our September response.

(2) As noted on Page 6 of our response, the condenser make-up line (a branch line from the AFW pump suction line) does not have the required valving arrangement. However, this line will be cut and capped near the pump suction line during installation of the new demineralized water system.

(b) "The AFW system boundary shall also include any portion of branch piping that is structurally coupled to the AFW system boundary such that the seismic response of the branch piping transmits loads to the AFW system. As a minimum, this includes the branch lines outside the AFW system boundary to a point of three orthogonal restraints."

RESPONSE: Our September 18, 1981 response included portions of branch piping that is structurally coupled to the AFW system boundary to a point of three orthogonal restraints with the following clarifications. The branch lines to the condensate transfer pump and condensate recovery transfer pump were seismically analyzed up to the condensate transfer pump, respectively. As identified on Pages 5 and 6 of our response, these pumps are non-seismic Category I components but were considered as pipe anchors in the stress analyses. This was justified since the piping to the pumps is seismically supported to maintain nozzle loads on the pump nozzles to within good engineering limits and the pumps are not required to function. In addition, these branch lines will be disconnected from the AFW pump suction during installation of the new demineralized water system.

(c) "All mechanical and electrical equipment, piping (e.g., instrument air), conduits and cable trays, which are necessary or contain items which are necessary for the operation of the AFW system, shall also be considered."

RESPONSE: All mechanical and piping necessary for the AFW system to perform its safety function were considered in our review of the system.

All electrical equipment and control and power circuits necessary for the operation of the mechanical equipment within the AFW system boundary were reviewed in the study. This includes power sources (480 VAC, 120 VAC and 125 VDC), cables, raceways, electrical penetrations, and control instrumentation cabinets. Isolated system outputs to non-essential functions such as computer and annunciator points were not considered."

(d) "In addition, the structure housing these systems and components shall be included."

RESPONSE: As detailed on Pages 8 and 9 of our Septembet 18, 1981 response, all structures supporting or housing AFW system components were considered.

Question 2

Generic Letter 81-14 states: "The results of any walk-down are requested within 120 days of receipt of this letter. These results should include all identified deficiencies and all corrective actions taken, or planned along with the schedules for such."

Our review of your response to Generic Letter 81-14 indicates that your response to this request is incomplete. Please provide schedules of planned corrective actions for:

(a) disconnecting the branch lines from the AFW pump suction to the condensate transfer pump and the condensate recovery transfer pump.

Response

The branch lines from the AFW pump suction to the condensate transfer pump and condensate recovery tank will be disconnected during the Unit 4 steam generator repair outage when the major modifications to the AFW system take place. (New turbines, redundant steam and feedwater lines.)

(b) the installation of a new demineralized water system.

Response

The DWDS storage tank is complete. The tie-ins to Unit 3 were completed prior to its startup from its steam generator repair outage. The tie-ins to Unit 4 will be completed during the Unit 4 steam generator repair outage commencing in October 1982.

(c) Additions of redundant safety-grade indication, and the trip and throttle valves.

Response

The modifications for safety grade, redundant, AFW flow indication have been completed for both Turkey Point Units 3 and 4. As was previously stated in the response to Generic Letter 82-05 (letter L-82-175 dated April 27, 1982) the power supplies for the flow indication and flow control for Unit 4 were not seismically or environmentally qualified. Modifications to the qualified power supplies will be installed in Unit 4 during the next scheduled outage of sufficient duration.

The addition of trip and throttle valves are associated with the new turbines. The installation of these turbines will be accomplished during the Unit 4 steam gemerator repair outage.

(d) Upgrading of AFW flow control indication

Response

See (c) above.