

November 22, 1991

Docket Nos. 50-250; 50-251
and 50-335

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Mr. J. H. Goldberg
President - Nuclear Division
Florida Power and Light Company
Post Office Box 14000
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Dear Mr. Goldberg:

SUBJECT: ST. LUCIE UNIT 1 AND TURKEY POINT UNITS 3 AND 4 - GENERIC LETTER
87-02, SEISMIC QUALIFICATION OF EQUIPMENT IN OPERATING PLANTS
(TAC NOS. M69483, M68303, AND M68304)

There are a number of issues that need to be resolved concerning the seismic qualification of equipment at St. Lucie, Unit 1 and Turkey Point, Units 3 and 4. Over the past few years, there has been an extensive exchange of information regarding this matter, both in writing as well as by telephone, without closure. We would like to meet with you to resolve the remaining outstanding issues. Enclosed is an agenda listing the technical issues that we would like you to address at that meeting. Please review the enclosure promptly and inform either of the undersigned as to when you will be ready to hold such a meeting.

Sincerely,

/s/
Rajender Auluck, Sr. Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

/s/
Jan A. Norris, Sr. Project Manager
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Enclosure: As stated

cc w/enclosure:
See next page

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OFC	:LA:PDII-2	:PM:PDII-2	:PM:PDII-2	:D:PDII-2	:
NAME	:D. Miller	:J. Norris	:R. Auluck	:H. Berkow	:
DATE	:11/21/91	:11/21/91	:11/22/91	:11/27/91	:

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St. Lucie Unit 1&2
Turkey Point Units 3&4

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PROPOSED TECHNICAL AGENDA FOR MEETING

The licensee responded to the staff's requests for information by letters dated December 13, 1989 and February 27, 1991. However, the responses did not sufficiently answer the staff's questions, and consequently, the staff has not been able to proceed with its evaluation of the licensee's program. In order that the staff can proceed with its review of pre-walkdown requirements, the licensee should respond to the following comments/questions (the item numbers relate to the staff's August 4, 1989 letter to the licensee):

Item 2

The licensee has not adequately discussed the assumptions which it made in developing its program. For example, the licensee did not discuss whether or not it assumed single active equipment failures as required by GL 87-02.

The licensee has not provided a detailed description of the safe shutdown path. Therefore, the staff requests that the licensee provides information by categorizing all front line systems, equipment, instrumentation and controls, power sources, support systems and components for each of the following four essential safe shutdown functions during and after a safe shutdown earthquake (SSE):

Reactor reactivity control

Reactor coolant pressure control

Reactor inventory control

Decay heat removal

Based on a cursory review of the safe shutdown equipment list (SSEL) provided in the licensee's 2/27/91 submittal, the staff questions the completeness of the SSEL. For example, the SSEL does not appear to include any valves.

Item 4

The licensee's response concerning relay evaluation is not acceptable. The generic program being developed by NUMARC, EPRI, and the NRC is intended for the Individual Plant. External Event Examination Program (IPEEE), not for USI A-46. The licensee's program should fully address relay evaluation, and as requested in the 8/4/89 staff letter, the program should list the relay plant identification numbers, the complete manufacturers' model numbers, and the floor elevation of each relay on the SSEL. The licensee shall specifically address the acceptance criteria to be used to assure the seismic adequacy of the relays required for safe shutdown.



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Item 5

The licensee needs to address the effect of seismic interactions on relays. For relays mounted in cabinets, any seismic interaction which results in any equipment physically impacting the cabinet is unacceptable, and must be evaluated as an outlier.

The licensee needs to address potential seismic interactions due to any non-SSEL equipment used for normal plant operations and maintenance activities. Such equipment may include, but is not limited to, filing cabinets, storage lockers, gas storage bottles, refueling equipment, monorails, hoists, cranes, radiation shields, and any miscellaneous equipment which could potentially cause a seismic interaction with safe shutdown equipment.

Item 6

The licensee has not fully described the criteria and procedures used for the evaluation of equipment anchorage. For example, the licensee has not discussed how its program accounts for the effects of bolt edge distance, bolt spacing, and cracked concrete.

The licensee indicated in the 2/27/91 submittal that it used a safety factor of 3.0 for all expansion anchors. The current staff position is that a safety factor of 3.0 is acceptable for certain equipment items, but some equipment items, such as cabinets containing relays listed on the SSEL, require a minimum safety factor of 4.0.

The staff finds that several of the references which the licensee cited for the purpose of anchorage evaluation are out-of-date and may not be acceptable. In particular, references 1, 3 and 4 listed on page 13 of the 2/27/91 submittal may not be acceptable. The licensee must describe in detail how the specific information contained in each reference was applied in evaluating equipment anchorage.

In addition to the information described above, the staff requests that the licensee provide detailed information concerning the procedures and criteria used to generate the in-structure response spectra used for equipment evaluations. This is necessary to resolve recent staff concerns with the in-structure response spectra of all plants required to address USI A-46.

After the pre-walkdown requirements have been reviewed and approved, the licensee must submit a final report which includes the post-walkdown requirements as specified in items 7 and 8 of the August 4, 1989 letter.