



Southern Nuclear Operating Company

the southern electric system

J. D. Woodard
Vice President
Farley Project

September 14, 1992

10 CFR 50.54(f)

Docket Nos. 50-348
50-364

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Joseph M. Farley Nuclear Plant
Supplemental Response to Generic Letter 88-20, Supplement 4

Gentlemen:

On June 28, 1991, the Nuclear Regulatory Commission issued Generic Letter 88-20, Supplement 4, "Individual Plant Examination of External Events (IPEEE) for Severe Accident Vulnerabilities - 10 CFR 50.54(f)." In accordance with the Generic Letter, Alabama Power Company (APCo) submitted a response to the Generic Letter on December 20, 1991 which proposed to 1) address the seismic IPEEE through the use of a Reduced-Scope Seismic Margins Assessment, 2) address the fire IPEEE through the use of the EPRI FIVE methodology, and 3) address potential vulnerabilities to high winds, external floods, and transportation and nearby facility accidents using the progressive screening approach specified in NUREG-1407. The response further proposed to submit the results of the IPEEE by June 1995.

In a letter dated August 6, 1992, the NRC transmitted to Southern Nuclear Operating Company (Southern Nuclear) the results of its review of the APCo response to Generic Letter 88-20, Supplement 4. In this letter, the NRC approved the use of the EPRI FIVE methodology for the fire IPEEE and the use of the progressive screening approach for identifying potential vulnerabilities to high winds, external floods, and transportation and nearby facility accidents. With regard to the proposed use of the Reduced-Scope seismic margins assessment methodology for the seismic IPEEE, the NRC requested that Southern Nuclear modify its proposed methodology to use the Reduced-Scope program for those Category I structures founded on competent rock and to apply special attention as discussed in Section 3.2.2 of NUREG-1407 to those safety-class structures that are not directly founded on competent rock. In addition, the NRC requested that Southern Nuclear submit the results of the IPEEE in a more timely manner if at all possible.

Southern Nuclear has evaluated the NRC comments on the APCo response to Generic Letter 88-20, Supplement 4 and agrees to modify its plan for the seismic IPEEE as follows: The seismic evaluation for the IPEEE will be performed using the guidance provided for the Reduced-Scope margins method presented in NUREG-1407. Special attention as discussed in Section 3.2.2 of NUREG-1407 will be applied to those Category I structures in the success paths which are not directly founded on competent rock as discussed in the attachment to this letter.

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As a clarification to your letter of August 6, 1992, Section 3.7.1.5 of the Farley Nuclear Plant Final Safety Analysis Report, "Soil Supported Category I Structures," states that the outdoor tanks are the only major Category I structures founded on soil. The Diesel Generator Building and the Service Water Intake Structure are supported on cast-in-place caissons which transfer the loads to the competent rock material as described in Section 3.8.5 of the Farley Nuclear Plant Final Safety Analysis Report, "Foundation and Concrete Supports." We therefore believe that it is appropriate to consider these structures as founded directly on the competent rock material and do not feel that special attention as discussed in Section 2.2.2 of NUREG-1407 is applicable to the Diesel Generator Building or the Service Water Intake Structure. However, as required by EPR1 NP-6041, the response spectra for the Diesel Generator Building and the Service Water Intake Structure will be evaluated to ensure that appropriate values are used for component screening in these structures.

With regard to the schedule for submittal of the IPEEE results, the submittal schedule included in APCo's December 20, 1991 response was developed considering the availability of scheduled plant outages for the performance of the required seismic walkdowns. Since NRC approval of the Supplemental Safety Evaluation Report on the Generic Implementation Procedure for the resolution of USI A-46 was not issued until May 22, 1992, the first available outage for which a combined USI A-46/IPEEE seismic walkdown can be planned for Farley Nuclear Plant Unit 1 is in the Spring of 1994. Following completion of the walkdown, additional time will be required for completion of the seismic margins assessment, documentation of the IPEEE and management review of the results prior to submittal to the NRC. Based upon these factors, Southern Nuclear cannot at this time commit to submit the results of the IPEEE prior to June 1995.

The information provided herein is true to the best of my knowledge and belief. If you have any questions, please advise.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY


J. D. Woodard


DEMc:map wp.shrd

Attachment

cc: Mr. S. D. Ebnetter
Mr. S. T. Hoffman
Mr. G. F. Maxwell

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 11th DAY OF Sept., 1992


Notary Public

My Commission Expires: 9-14-92

ATTACHMENT

PROPOSED METHOD FOR EVALUATING SOIL-FOUNDED STRUCTURES

As discussed in Section 3.2.2 of NUREG-1407, the ground motion (i.e., the Farley Nuclear Plant SSE of 0.1g pga) will be considered at the surface in the free field (i.e., at the hypothetical outcrop of the competent rock material for the Farley Nuclear Plant) and the secondary condition of shallow soil will be appropriately considered to determine the free-field motion in the vicinity of those structures in the selected success paths which are founded on soil (i.e., outdoor tanks). The capacity evaluation of the outdoor tanks in the success paths will take into account the effects of soil-structure interaction. Buried tanks (i.e., the diesel generator fuel oil storage tanks) will be evaluated in accordance with the guidance of EPRI NP-6041 to ensure that piping connections are not subject to failure due to large relative displacements of the surrounding soil.