



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

June 20, 1997

Mr. H. L. Sumner, Jr.  
Vice President  
Southern Nuclear Operating  
Company, Inc.  
P. O. Box 1295  
Birmingham, Alabama 35201-1295

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING INCORPORATION OF THE  
GENERIC IMPLEMENTATION PROCEDURE IN THE FINAL SAFETY ANALYSIS REPORT  
(FSAR) UNDER THE PROVISIONS OF 10 CFR 50.59 - EDWIN I. HATCH NUCLEAR  
PLANT, UNITS 1 AND 2 (TAC NOS. M69451 AND M69452)

Dear Mr. Sumner:

On September 25, 1992, Georgia Power Company (GPC) submitted the initial response to Supplement No. 1 to Generic Letter (GL) 87-02, "Verification of Seismic Adequacy of Mechanical and Electrical Equipment in Operating Reactors, Unresolved Safety Issue (USI) A-46," dated May 22, 1992, regarding USI A-46 for the Edwin I. Hatch Nuclear Plant, Units 1 and 2 (Plant Hatch). In that submittal, GPC indicated its intent to incorporate provisions of the Generic Implementation Procedure (GIP) into the FSAR, employing the provisions of 10 CFR 50.59 upon receipt of a final plant-specific Safety Evaluation (SE) resolving USI A-46. The GIP was developed by Seismic Qualification Utility Group (SQUG) specifically for use in resolving USI A-46. The staff approved the use of the GIP in the SE dated May 22, 1992, issued with Supplement 1 to GL 87-02. The staff's SE stated that a licensee may revise its licensing basis in accordance with 10 CFR 50.59 to reflect the acceptability of the USI A-46 (GIP) methodology for verifying the seismic adequacy of electrical and mechanical equipment covered by the GIP; however, the staff assumed that such incorporation would not lead to a reduction in the licensees' licensing basis margins. In a letter to the NRC on July 31, 1996, GPC informed the staff that it had changed the plant licensing basis by incorporating the USI A-46 GIP methodology into the FSAR in Revision 14C. In a request for additional information dated January 30, 1997, relating to GPC's July 31 and August 23, 1996, submittals on the USI A-46 implementation at Plant Hatch, the staff requested GPC to provide complete documentation associated with the 50.59 evaluation. GPC submitted the requested documentation in its response of April 25, 1997.

Based on a review of GPC's April 25, 1997, response, the staff identified a potential violation involving the subject 50.59 evaluation. The FSAR revision would permit, as an alternative, the use of the GIP procedures for the seismic qualification of all mechanical and electrical equipment in the plant. The GIP is only acceptable for resolution of USI A-46 seismic adequacy issues and may be used for verifying the seismic adequacy of new or replacement equipment as stated in the staff's SE of May 22, 1992, when 50.59 criteria are met.

The staff believes certain provisions of the GIP may not be consistent with Plant Hatch licensing basis. Among the provisions in the GIP that might not be consistent with the FSAR licensing basis criteria and which were not addressed in GPC's 50.59 evaluation, is a provision that permits the use of seismic capacity spectrum equal to 1.5 times the SQUG Bounding spectrum for

the seismic evaluation of equipment located on floors within 40 feet above the effective grade level. For Plant Hatch, the SQUG capacity spectrum is considerably lower than the FSAR in-structure response spectra (IRS) for some floors in the reactor building at certain frequency ranges. GPC in its April 25, 1997, response, stated that in performing the A-46 evaluation, it has employed a demand spectrum equal to one-half the Plant Hatch seismic margin earthquake IRS, which was specifically approved by the staff for the explicit purpose of USI A-46 resolution at the facility. The spectral accelerations in the IRS that are developed from .5 times the seismic margin earthquake spectrum are lower than the capacity spectrum that is based on 1.5 times the SQUG Bounding spectrum for floors within 40 feet above the grade level.

In applying the GIP (in lieu of previously approved FSAR criteria) as a licensing basis criteria for the qualification of mechanical and electrical equipment, GPC could use either 1.5 times the plant safe shutdown earthquake ground spectrum or the seismic margin earthquake IRS times .5 as the required demand spectra for equipment within 40 feet above the grade level. At some floor elevations, either of these spectra may underestimate the seismic demand when compared to the FSAR response spectra (licensing basis) at certain frequency ranges. The seismic qualification of mechanical and electrical equipment to the GIP provision, as discussed above, could potentially result in an underestimation of the equipment seismic demand. This can result in the eventual reduction to the licensing basis margins for the components or systems affected by such changes to the facility and, consequently, would not be consistent with the limitations of 10 CFR 50.59.

As stated above, GPC's 50.59 evaluation to incorporate the GIP in the FSAR did not address other potential areas of conflict between the licensing basis criteria and the GIP document. These areas include (but may not be limited to), in addition to the seismic design spectra issue discussed above, variation in damping requirements for equipment, specific requirements for qualification by testing or analysis for certain equipment, and the use of the "rule-of-the-box" endorsed in the GIP. Furthermore, the staff has also identified that GPC has deviated from its original commitment in the September 16, 1992, response to GL 87-02 on USI A-46 resolution. In that response, GPC stated that Plant Hatch intended to affect an FSAR change by incorporating the GIP-2 procedures via a 50.59 evaluation upon receipt of a final plant-specific SE resolving USI A-46 (a condition affirmed in the staff's May 22, 1992, SE). As of the date of this letter, the staff has not issued its final SE on the A-46 implementation at Plant Hatch. In the meantime, GPC has already incorporated the GIP into the FSAR Revision 14C for Units 1 and 2.

Based on the above discussion, the staff concludes that GPC's action of changing the FSAR as discussed in the letters of July 31, 1996, and April 25, 1997, to the NRC, involves a potential 50.59 violation as well as a deviation from GPC's commitment in its September 16, 1992, letter to the staff. The staff is unaware whether the GIP procedure has been employed by GPC in

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actually making a change to the facility outside the scope of USI A-46. Therefore, we request that you provide your response to resolve the above staff concerns within 60 days from the date of this letter. If you have any questions, please contact me at (301) 415-1458.

Sincerely,

ORIGINAL SIGNED BY:

Ngoc B. Le, Project Manager  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

cc: See next page

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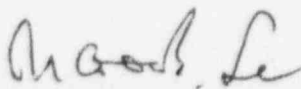
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Docket Nos. 50-321 and 50-366

cc: See next page

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