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the southern electric system

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May 11, 1992

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

PLANT HATCH - UNIT 2
NRC DOCKET 50-366
OPERATING LICENSE NPF-5
SPECIAL REPORT 2-92-002
SEISMIC MONITORING INSTRUMENT INOPERABLE FOR
LONGER THAN 30 DAYS RESULTS IN SPECIAL REPORT
AS REQUIRED BY TECHNICAL SPECIFICATIONS

Gentlemen:

In accordance with the Unit 2 Technical Specifications section 3.3.6.2, Georgia Power Company is submitting the enclosed Special Report concerning an event where a seismic monitoring instrument was inoperable for longer than 30 days. This event occurred at Plant Hatch - Unit 2.

If you have any questions in this regard, please contact this office.

Sincerely,


W. G. Hairston, III

JKB/cr

Enclosure: Special Report 2-92-002

cc: (See next page.)

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U.S. Nuclear Regulatory Commission

May 11, 1992

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cc: Georgia Power Company
Mr. H. L. Sumnor, General Manager - Nuclear Plant
NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C.
Mr. K. Jabbour, Licensing Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II
Mr. S. D. Ebnetter, Regional Administrator
Mr. L. D. Wert, Senior Resident Inspector - Hatch

ENCLOSURE

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A. REQUIREMENT FOR REPORT

This report is required per Unit 2 Technical Specifications section 3.3.6.2. This section of the Technical Specifications states the seismic monitoring instrumentation shall be operable at all times. Action statement "a" of this section states that with one or more of the required seismic monitoring instruments inoperable for more than 30 days, a Special Report is required to be submitted within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument to operable status. In this event, seismic accelerometer 2L51-N004 was inoperable for greater than 30 days; consequently, a Special Report is required.

B. UNIT STATUS AT TIME OF EVENT

On 4/7/92, at approximately 1200 CST, Unit 2 was in the Run mode at an approximately power level of 2436 CMWT (approximately 100 percent rated thermal power).

C. DESCRIPTION OF

On 4/7/92, at approximately 1200 CST, plant Instrument and Control personnel were performing plant procedure 57SV-L51-003-0S, "Seismic Instrumentation Functional Test and Calibration." This procedure is required to be performed semiannually by Technical Specifications Table 4.3.6.2-1. During performance of the procedure, the signal from triaxial time-history accelerometer 2L51-N004 was determined to contain an excessive amount of noise. Therefore, the seismic instrument was declared inoperable and Limiting Condition for Operation (LCO) 2-92-249 was initiated to track its status. Maintenance Work Order (MWO) 2-92-2103 was also initiated to investigate and correct the problem.

The instrument is located inside the drywell, on a carbon steel plate rigidly attached to the feedwater inlet line to the Reactor Pressure Vessel. Since the drywell is inaccessible during power operation, and since the unit was operating at power, repair could not be effected before the 30 day time limit expired. Consequently, on 5/7/92, 2L51-N004 was still inoperable, and this Special Report is required.

ENCLOSURE (Continued)

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D. CAUSE OF EVENT

The root cause cannot be determined conclusively until access to the drywell can be attained and an investigation conducted.

E. ANALYSIS OF EVENT

Four strong-motion triaxial time-history accelerometers are installed at appropriate locations to enable prompt determination of the severity of any earthquake which may be experienced. One of the instruments is installed in the switchyard to measure the free-field-ground acceleration and functions as a seismic trigger. Another is installed in the Diesel Generator Building and the other two accelerometers are located in the Reactor Building: one on the east side of the Reactor Building drywell pedestal at elevation 87 feet, and the other inside the drywell on a carbon steel plate rigidly attached to the feedwater inlet line to the Reactor Pressure Vessel.

The signals of the four accelerometers are recorded on magnetic tape in the main control room. Following a seismic event, this data would be processed to compare the measured seismic response with the Unit 2 seismic design basis.

In this event, the accelerometer located on the feedwater discharge line was declared inoperable. However, the free-field accelerometer which functions as a seismic trigger and the other two accelerometers are operable and would provide sufficient data should a seismic event occur. The accelerometers have no other design functions.

Based on the above information, it is concluded that the event has no adverse impact on nuclear safety. The above analysis is applicable to all operating conditions.

F. CORRECTIVE ACTIONS

Corrective actions for this event include:

1. Declaring seismic instrument 2L51-N004 inoperable and establishing a tracking LCO.
2. Performing a root cause analysis and implementing corrective actions as necessary (i.e., completing MWO 2-92-2103) during the next Unit 2 outage of sufficient duration where containment entry is to be made.
3. Returning 2L51-N004 to operable status during the next Unit 2 outage of sufficient duration where containment entry is to be made.

ENCLOSURE (Continued)

SEISMIC MONITORING INSTRUMENT INOPERABLE FOR
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4. A previous failure of seismic monitor 2L51-N004 occurred in 1990 and was reported by Special Report 2-90-002, dated March 26, 1990. The cause of the failure was determined to be vibration induced degradation resulting from the instrument's location on the reactor feedwater piping. This instrument is a force-balance type accelerometer which is sensitive to vibration. As a result of this failure, GPC performed an engineering evaluation of the feasibility of relocating 2L51-N004 and/or replacing the instrument to improve reliability. The evaluation determined relocation was not desirable at that time.

Discussions with the vendor were held concerning the need to increase the instrument's reliability. As a result, seismic monitor 2L51-N004 was replaced with a like kind instrument having an increased range. However, as evidenced by the current component failure, the desired reliability has not been achieved. Consequently, seismic monitor 2L51-N004 will be replaced during each refueling outage until the desired reliability is obtained by further replacements or actions.