CP&L
Carolina Power & Light Company

P.O. Box 101, New Hill, N.C. 27562

November 20, 1984

Mr. James P. O'Reilly
United States Nuclear Regulatory Commission
Region II
101 Marietta Street, Northwest (Suite 2900)
Atlanta, Georgia 30323

NRC-294

CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT
1986 - 900,000 KW - UNIT 1
7.5 KVA INVERTERS-
CAPACITOR TERMINATIONS, ITEM 190

Dear Mr. O'Reilly:

Attached is an interim report on the subject item which was deemed reportable per the provisions of 10CFR50.55 (e) and 10CFR, Part 21, on October 24, 1984. CP&L is pursuing this matter, and it is currently projected that corrective action and submission of the final report will be accomplished by January 31, 1985.

Thank you for your consideration in this matter.

Yours very truly,

R. M. Parsons
Project General Manager
Completion Assurance
Shearon Harris Nuclear Power Plant

RMP/das

Attachment

cc: Messrs. G. Maxwell/R. Prevatte (NRC-SHNPP)
Mr. R. C. DeYoung (NRC)

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CAROLINA POWER & LIGHT COMPANY

SHEARON HARRIS NUCLEAR POWER PLANT

UNIT NO. 1

INTERIM REPORT

7.5KVA INVERTER CAPACITOR TERMINATIONS

CQL-8255

ITEM NO. 190

NOVEMBER 21, 1984

REPORTABLE UNDER 10CFR50.55(e) AND 10CFR21

SUBJECT: Shearon Harris Nuclear Power Plant/Unit No. 1 10CFR50.55(e) and 10CFR Part 21 reportable deficiency. 7.5KVA instrument inverter tuning capacitor terminations are such that a seismic event could result in a significant drop in inverter output voltage. This would result in the loss of ESF instrumentation and false reactor trip.

ITEM: Ferroresonant transformer to tuning capacitor connections in 7.5KVA static inverters.

SUPPLIED BY: Westinghouse Nuclear Service Division

NATURE OF DEFICIENCY: During the manufacture of 7.5KVA static inverters with non-PCB capacitors, ferroresonant transformer leads using fast-on terminals were, on some occasions, connected to tuning capacitor solder lugs. This resulted in deformed solder lugs and compromised the seismic qualification of the inverter.

SCOPE OF PROBLEM: Investigation of this problem revealed deficiencies in three of four instrumentation inverters and two BOP inverters. For the nonsafety inverters, this deficiency represents an operational limitation.

DATE PROBLEM OCCURRED: Westinghouse notification of October 5, 1984 was followed by inspection and verification of problem on October 22, 1984.

DATE PROBLEM REPORTED: On October 24, 1984, CP&L (N. J. Chiangi) notified the NRC (Mr. A. Hardin) that the above item was reportable under 10CFR50.55(e) and 10CFR Part 21.

SAFETY IMPLICATIONS: Loss of three of four channels of ESF instrumentation results in false reactor trip.

REASON DEFICIENCY IS REPORTABLE: This is reportable as a manufacturing error since as presently built, the inverters could prove to be inoperative during a seismic event. A common mode failure would result in unavailability of ESF instrumentation and false reactor trip.

CORRECTIVE ACTION:

1. Inspection of fast-on terminal for distortion and correction per Westinghouse Technical Bulletin TB-84-08 will ensure adequate connection in the event that it is used on a capacitor fast-on lug that may be available after a possible reroute of ferroresonant leads.

2. If no spare fast-on lug is available, the fast-on terminal is to be removed and the lead wire is to be solder connected to appropriate solder lug on capacitor by means of detailed procedure included in TB-84-08.

3. Adequacy of connection, fast-on or solder per above, is to be tested by performing 20 pound pull test.

FINAL REPORT: The final report on this item is pending completion of the corrective actions stated above. It is currently projected that the final report will be issued by January 31, 1985.