CP&L
Carolina Power & Light Company

85 FEB 6 P1:04

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

January 30, 1985

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

NRC-320

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 our second 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 March 15, 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/sae

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

SECOND INTERIM REPORT

7.5KVA INVERTER CAPACITOR TERMINATIONS

CQL-8255

ITEM NO. 190

JANUARY 16, 1985

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, RPS, and NIS.

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 inverters results in a loss of safety-related RPS, nuclear instrument system (NIS), and other safety-related vital instrumentation and control required for safe shutdown.

REASON DEFICIENCY IS REPORTABLE: Failure of the supplier's QA program to control internal electrical termination practices resulted in equipment being shipped to the site which deviated from the supplier's specifications and inspection criteria. Such deviation, by analysis, results in compromised safety systems and functions.

CORRECTIVE ACTION: Westinghouse Technical Bulletin TB-84-08 has been issued as previously reported. The solder lug to fast-on terminal connections have been corrected. An ancillary problem developed during the "pull test". An attempted implementation of this recommended action resulted in NCR-84-2486 after several fast-on to fast-on capacitor connections failed to meet the 20-pound criterion.

After discussions with Westinghouse on pull test methodology, the conclusion reached was to reperform this test with the 20-pound passing standard.

FINAL REPORT: The final report on this item is pending successful disposition of the pull test. Because of the difficulties encountered, the projected final report date has been moved to March 15, 1985.