CP&L
Carolina Power & Light Company

P. O. Box 101, New Hill, N. C. 27562
December 22, 1983

Mr. James P. O'Reilly
United States Nuclear Regulatory Commission
Region II
101 Marietta Street, Northwest (Suite 2900)
Atlanta, Georgia 30303

NRC-160

CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT
1986-90 - 900,000 KW - UNITS 1 & 2
SOLID STATE PROTECTION SYSTEM,
PURCHASE ORDER NY-435002, ITEM 100

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 12, 1982. CP&L is pursuing this matter, and it is currently projected that corrective action and submission of the final report will be accomplished by December 30, 1984.

Thank you for your consideration in this matter.

Yours very truly,

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

RMP/sh

Attachment

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

CAROLINA POWER & LIGHT COMPANY

SHEARON HARRIS NUCLEAR POWER PLANT

UNIT NO. 1

SECOND INTERIM REPORT

SOLID STATE PROTECTION SYSTEM

ITEM 100

DECEMBER, 1983

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

SUBJECT: Shearon Harris Nuclear Power Plant, Unit 1, 10CFR50.55(e) 10CFR, Part 21, reportable deficiency design in the Solid State Protection System (SSPS) purchased under Purchase Order NY-435002, Westinghouse Shop Order 300.

ITEM: On-line test circuit for the SSPS

SUPPLIED BY: Westinghouse Electric Corp., Pittsburgh, Pennsylvania

NATURE OF DEFICIENCY: The subject Unit 1 equipment has been received at the Shearon Harris plant. Basic equipment design is not unique to the Harris Plant.

During a review of the schematic diagram of the SSPS, Westinghouse engineers discovered that an undetectable failure could occur in the on-line test circuits.

This consists of a normally closed contact(s) in a safeguards circuit(s) that is purposely opened during the test.

Reclosure of the contacts when testing is complete cannot be verified with present design.

DATE PROBLEM OCCURRED: Problem was verified by Westinghouse on August 3, 1982.

DATE PROBLEM REPORTED: September 9, 1982 - CP&L (N. J. Chiangi) notified the NRC Region II (A. Hardin) that this item was potentially reportable under 10CFR50.55(e) and 10CFR21.

October 12, 1982 - CP&L (L. Jones) notified the NRC Region II (A. Hardin) that this item was reportable under 10CFR50.55(e) and 10CFR21.

SCOPE OF PROBLEM: The SSPS is redundant, Trains A and B. Either train will actuate the safeguards system.

Each train has sixteen (16) of the subject contacts. Failure of one (1) or more contacts to reclose in Train A would block operation of a part of the safeguards system if the like contact in Train B also failed to reclose. A total of thirty-two (32) contacts must be verified.

SAFETY IMPLICATION

As stated in "Scope of Problem", failure of a single contact in Train A and B, which perform the same safeguards function, would make this safeguards function inoperable. Additional like failures would render further safeguards functions inoperable.

REASON DEFICIENCY IS REPORTABLE:

The safeguards system could be rendered inoperable.

CORRECTIVE ACTION:

Westinghouse is continuing to review its design prior to change recommendations.

Westinghouse has revised test procedures for operating plants to verify contact reclosure.

Since Harris Plant is still in the construction stage, CP&L will take corrective action as mutually decided and agreed upon by Westinghouse and CP&L.

Present design revision intent will negate revised test procedure. The original procedure will be valid.

FINAL REPORT:

A final report will be issued when the Westinghouse study has been completed and satisfactory corrective action has been taken.

The projected final report date is December 30, 1984.