



Carolina Power & Light Company

P.O. Box 101, New Hill, NC 27562
June 11, 1985

Dr. J. Nelson Grace
United States Nuclear Regulatory Commission
Region II
101 Marietta Street, Northwest (Suite 2900)
Atlanta, Georgia 30323

NRC-370

35 JUN 1985
A10:05

CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT
1986 - 900,000 KW - UNIT 1 ~~75400400~~
CABLE SIZING DEFICIENCY, ITEM 207

Dear Dr. Grace:

Attached is our final report on the subject item which was deemed reportable per the provisions of 10CFR50.55(e) on February 19, 1985. With this report, Carolina Power & Light Company considers this matter closed.

If you have any questions regarding this matter, please do not hesitate to contact me.

Yours very truly,

R. A. Watson
Vice President
Shearon Harris Nuclear Power Plant

RAW:aj

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 1

FINAL REPORT

CABLE SIZING DEFICIENCY
(PROTECTING #10 AWG CONDUCTOR
WITH A 100 AMP BREAKER)

NCR 85-279

ITEM 207

JUNE 11, 1985

REPORTABLE UNDER 10CFR50.55(e)

SUBJECT: Shearon Harris Nuclear Power Plant Unit No. 1 10CFR50.55(e) reportable deficiency involving the use of a 100 amp circuit breaker with a #10 AWG conductor cable.

ITEM: Auxiliary Transfer Panel Power Feeder Design.

NATURE OF DEFICIENCY: The breaker-conductor interface was such that in the event of a severe circuit overload or a relatively high resistance short circuit, sufficient current would be conducted by the #10 AWG conductor to damage the conductor insulation and this current would not be sufficient to trip the breaker.

DATE PROBLEM IDENTIFIED: This item was discovered on January 28, 1985, and identified via NCR 85-279 on February 4, 1985.

DATE PROBLEM REPORTED: On February 19, 1985, CP&L (Mr. N. J. Chiangi) notified the NRC (Mr. A. Hardin) that the item was reportable per the provisions of 10CFR50.55(e).

SCOPE OF PROBLEM: This problem was discovered to occur at each of two redundant auxiliary transfer panels. Only cable No. 10821A-SA in panel 1A-SA had been installed, inspected, and accepted.

SAFETY IMPLICATIONS: Should the control room become uninhabitable during a fire or similar emergency, the auxiliary transfer panels are required to allow controlled shutdown from the remote shutdown panels. The inability of the breaker to preclude or even mitigate conductor damage compromises the reliability of the power feed to the auxiliary transfer panel.

REASON DEFICIENCY IS REPORTABLE: As damaging current levels are believed creditable for the originally designed and/or installed power feed conductors, the ability of the auxiliary transfer panels to perform their safety function of allowing remote controlled shutdown was compromised.

CORRECTIVE ACTION: The subject #10 AWG conductor was replaced with a #2 AWG conductor per FCR-E-4052. Administrative action has been taken to ensure closer monitoring and control of cable size design in HPES electrical. In addition, a design guideline has now been issued which requires that cable size be verified based on the connected load and circuit length, before cable routes and sizes can be released by HPES.