



Carolina Power & Light Company

P.O. Box 101, New Hill, NC 27562  
April 29, 1985

85 MAY 13 1985

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

NRC-359

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

50-400

Dear Dr. Grace:

Attached is our second interim report on the subject item which was deemed reportable per the provisions of 10CFR50.55(e) on February 19, 1985. CP&L is pursuing this matter, and it is currently projected that corrective action and submission of the final report will be accomplished by June 14, 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:dd

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

SECOND INTERIM REPORT

PROTECTING #10 AWG CONDUCTOR  
WITH A 100 AMP BREAKER

NCR 85-279

ITEM 207

APRIL 29, 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 DEFICIENCIES ARE 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. An administrative action has been taken to more closely monitor and control cable size design in HPES electrical. Cable sizing and resizing verification at SHNPP is to be controlled per an Engineering Guide. CP&L is currently completing a review of the Ebasco issued design basis document upon which the Engineering Guide will be based. It is expected that the review, approval and issuance of the Engineering Guide will be accomplished by June 14, 1985.

**FINAL REPORT:** It is currently projected that the final report will be issued by June 14, 1985.