

CP&L

Carolina Power & Light Company

P. O. Box 101, New Hill, N. C. 27562
June 1, 1983

Mr. James P. O'Reilly
United States Nuclear Regulatory Commission
Region II
101 Marietta Street, Northwest (Suite 3100)
Atlanta, Georgia 30303

NRC-82

USNRC REGION II
ATLANTA, GEORGIA
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CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT
1986-90 - 900,000 KW - UNITS 1 & 2
PROTECTION SYSTEM FOLLOWING A SECONDARY HIGH
ENERGY LINE RUPTURE (STEAM GENERATOR REFERENCE LEG HEATUP) - ITEM 41

Dear Mr. O'Reilly:

Attached is our third interim report on the subject item which was deemed reportable per the provisions of 10CFR50.55(e) on July 7, 1980. 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 31, 1984.

Thank you for your consideration in this matter.

Yours very truly,



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

RMP/dh

Attachment

cc: Mr. G. Maxwell (NRC-SHNPP)
Mr. R. Prevatte (NRC-SHNPP)
Mr. V. Stello (NRC)

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CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT

UNITS 1 AND 2

INTERIM REPORT #3

POTENTIAL SIGNIFICANT FAILURE OF THE
REACTOR PROTECTION SYSTEM FOLLOWING A SECONDARY
HIGH ENERGY LINE RUPTURE
(STEAM GENERATOR REFERENCE LEG HEATUP)
ITEM 41

JUNE 1, 1983

REPORTABLE UNDER 10CFR50.55(e)

SUBJECT: 10CFR50.55(e) Reportable Item
Shearon Harris Nuclear Power Plant
Potential Significant Failure of the Reactor Protection
System Following a Secondary High Energy Line Break (S/G
Reference Leg Heatup)

ITEMS: Steam Generator Level Measurement for SHNPP Units 1 and 2

SUPPLIED BY: Westinghouse Water Reactor Division

NATURE OF
DEFICIENCY: Westinghouse notified the NRC under 10CFR21 in June 1979
of a potentially significant failure of the reactor
protection system following a secondary high energy
line break. Such a break within containment could
result in the heatup of the steam generator level
measurement reference leg. A heatup of the reference
leg would result in severe density changes which
would give erroneous indication of steam generator
water level.

DATE PROBLEM
WAS CONFIRMED
TO EXIST: Westinghouse Letter CQL-5801 dated March 20, 1980,
received March 28, 1980.

PROBLEM
REPORTED: N. J. Chiangi notified the NRC (Mr. J. Bryant) that
this item was reportable under 10CFR50.55(e) on
July 7, 1980.

CP&L letter dated July 8, 1980 - N. J. Chiangi to
J. P. O'Reilly transmitting an interim report.

CP&L letter dated December 23, 1981 - N. J. Chiangi
to J. P. O'Reilly transmitting a second interim
report.

SCOPE OF
PROBLEM: Units 1 and 2 Steam Generators (three per unit).

SAFETY
IMPLICATIONS: An erroneous indication of the steam generator water
level could result in delayed signals to the reactor
protection system.

REASON PROBLEM
IS REPORTABLE: Delayed reactor protection signals could lead to a
degraded safety condition.

CORRECTIVE
ACTION:

Westinghouse has now adopted insulation of the steam generator reference leg as a permanent solution to the heatup concern. Since containment piping insulation is not yet scheduled, corrective action will be achieved by implementing design changes to incorporate insulation of the steam generator reference legs.

FINAL
REPORT:

A final report will not be available until the corrective action has been completed, which is expected to be March 31, 1984 for Unit 1.