



Carolina Power & Light Company

85 SEP 17 11 25 AM Box 101
New Hill, North Carolina 27562
September 11, 1985

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

NRC-387

CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT
1986 - 900,000 KW - UNIT 1
7.5 KVA INVERTERS -
INSULATION BREAKDOWN, ITEM 191

Dear Dr. Grace:

On October 29, 1984, Mr. N. J. Chiangi notified the NRC of a potentially reportable item per the provisions of 10CFR50.55(e) and 10CFR, Part 21. The NRC was informed that a potential exists for insulation breakdown on G.E. supplied transformers. These transformers are part of the Westinghouse inverters supplied to the Harris Project. Westinghouse has notified the NRC that this is a 10CFR50.55(e) item for plants under construction.

This item continues to be under evaluation by CP&L at this time. It is currently projected that we will require until February 15, 1986, to complete required testing and report on the reportability of this item.

Thank you for your consideration in this matter.

Yours very truly,

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

RAW:bsp

Attachment

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

8509270163 850911
PDR ADOCK 05000400
S PDR

NBI-NRC-387/1-OS5

11
IE17
B&B

CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT

UNIT 1

GE FERRO-RESONANT TRANSFORMERS
UTILIZED IN WESTINGHOUSE 7.5 KVA INVERTERS

ITEM 191

SEPTEMBER 4, 1985

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

SUBJECT: 10CFR50.55(e) and 10CFR21 Potentially Reportable Item, Shearon Harris Nuclear Power Plant Unit 1, GE ferro-resonant transformers utilized in Westinghouse 7.5 KVA Inverters.

ITEM: 7.5 KVA Vital Inverters for SHNPP Unit 1

SUPPLIED BY: Westinghouse Water Reactor Division/General Electric

NATURE OF DEFICIENCY: Westinghouse notified CP&L in October 1984 that a potential problem existed on safety related 7.5 KVA vital inverters. The transformers supplied by General Electric for the inverters were found to have the potential for insulation breakdown due to vibration caused by the magnetic forces encountered while energized.

DATE PROBLEM WAS CONFIRMED TO EXIST: Westinghouse Letter CQL-8272 dated October 5, 1984 and received October 12, 1984.

PROBLEM REPORTED: CP&L (N. J. Chiangi) notified the NRC that this item was potentially reportable under 10CFR50.55(e) and 10CFR21 on October 29, 1984.

CP&L (R. M. Parsons) submitted letter no. NRC-296 to the NRC on November 28, 1984 stating that the evaluation for reportability was projected to be complete by June 7, 1985.

CP&L (R. M. Parsons) submitted letter no. NRC-368 to the NRC on May 31, 1985 stating that testing was still underway and it was projected that the evaluation would be complete by September 13, 1985.

SCOPE OF PROBLEM: Investigation of this problem revealed that all instrumentation inverters are the type ferro-resonant transformer (W-P/N 3485C38 H08) that had shorts to ground in inverters at other plants.

SAFETY IMPLICATIONS: Loss of all four channels of ESF instrumentation results in false reactor trip.

REASON DEFICIENCY IS POTENTIALLY REPORTABLE: As of this date, CP&L has not confirmed that this problem exists in SHNPP inverters.

CORRECTIVE
ACTION:

The subject safety inverters will be energized under load for a six month period. Any ferro-resonant transformer operated under load for a six month period that does not exhibit output degradation may be considered satisfactory.

Testing has been successfully completed on four of the six inverters being tested. A fifth inverter is projected to complete testing in October 1985. Due to failure of electronic parts in some of the inverters, parts have been taken from the sixth inverter to support the testing of the other inverters. Due to limited operation of this inverter, it is projected that we will require until February 15, 1986 to determine the reportability of this item.