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SUBJECT: Responds to NRC 891108 ltr re violations noted in Insp Rept 50-400/89-21.Corrective actions noted.

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DEC 2 1 1989

Letter Number: HO-890171 (O)

Document Control Desk
United States Nuclear Regulatory Commission
Washington, DC 20555

NRC-694

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400
LICENSE NO. NPF-63
REPLY TO A NOTICE OF VIOLATION

Gentlemen:

In reference to your letter of November 8, 1989, referring to I.E. Report RII: 50-400/89-21, the attached is Carolina Power and Light Company's reply to the violation identified in Enclosure 1.

It is considered that the corrective actions taken/planned are satisfactory for resolution of the item.

Via telephone conversation between Mr. Michael Wallace (CP&L), Mr. Jeff Tedrow and Bob Carrol of your staff on December 7, 1989 an extension was granted to CP&L for responding to the violation. The reason for the extension was due to a delay in the Harris Plants receipt of the Notice of Violation.

Thank you for your consideration in this matter.

Very truly yours,

R. B. Richey

R. B. Richey, Manager
Harris Nuclear Project

MGW:dgr

Attachment

cc: Mr. R. A. Becker (NRC)
Mr. S. D. Ebneter (NRC - RII)
Mr. J. E. Tedrow (NRC - SHNPP)

IE01
1/1

MEM/HO-3901710/1/OS1

Attachment to CP&L Letter of Response to NRC I. E. Report R11: 50-400/89-21

Reported Violation:

10 CFR Part 50, Appendix B, Criterion III, Design Control, requires that measures be established for the selection and review for suitability of materials, parts, equipment, and processes that are essential to the safety-related functions of structures, systems and components.

Contrary to the above, commercial grade ITE Molded Case Circuit Breakers were installed in safety-related electrical systems and the review for suitability of equipment by the CP&L Engineering Department was inadequate. The breakers were physically changed by the manufacturer (i.e., instantaneous trip and voltage rating) and the seismic qualifications of the breakers were not verified prior to installation in safety-related applications. Further, the modified breakers were not fully qualified by testing in that all of the required critical characteristic tests (i.e., a dielectric test between the line and load terminals with the breaker open, a full load starting current test, contact resistance measurement with the breaker closed, or testing with the breaker properly oriented) were not considered or performed.

This is a Severity Level IV Violation (Supplement I).

Denial or Admission and Reason for Violation:

The violation is admitted.

Commercial grade ITE molded case circuit breakers were installed in safety-related equipment at the Harris Nuclear Plant (HNP) without an adequate review. HNP personnel had identified a change to the subject breakers and requested an engineering evaluation of the change via Plant Change Request (PCR) 4007. The Nuclear Engineering Department (NED) understood the scope of PCR-4007 to be limited to evaluating the acceptability of the changes in the time current curves in regards to the electrical coordination/protection studies. PCR 4007 did not evaluate the seismic qualification of the subject breakers.

Further, the dedication process for the subject breakers did not include testing of critical characteristics. During the time frame the subject breakers were received at HNP, testing was not being performed of breakers received based on several breaker manufacturers indicating that initial testing was detrimental to the breaker.

Corrective Steps Taken and Results Achieved:

A field revision to PCR-4007 has been initiated and is currently being worked to evaluate the acceptability of using the subject commercial grade breakers in safety-related applications. At present the breakers installed in safety-related applications are acceptable from an electrical standpoint and are considered to be seismically qualifiable based on the Seismic

Qualification Utility Group (SQUG) curves which envelope this application. However, additional seismic testing (through Wyle Test Labs) and evaluation of test results will be performed to provide documentation of seismic qualification. This effort will be completed by January 31, 1990.

The subject breakers installed in safety-related application have been tested per procedure CM-E0010, 480 VAC Molded Case Circuit Breaker Test or equivalent surveillance/periodic test procedures with acceptable results achieved. Tests include smooth breaker operation, breaker continuity, megger measurement, thermal trip test and instantaneous trip test.

Corrective Steps Taken to Avoid Further Violations:

This incident has been reviewed by both plant and NED personnel to avoid future miscommunication as to the scope of PCRs.

Molded case circuit breakers purchased for safety related applications are purchased commercial grade and are tested for critical characteristics upon receipt per procedure CM-E0010. This requirement has been added to the receipt inspection instructions. Test data sheets are kept with each breaker placed in stock.

Date When Full Compliance Will Be Achieved:

Full compliance is expected by January 31, 1990.