



Carolina Power & Light Company

P. O. Box 101, New Hill, N. C. 27562  
May 31, 1983

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

NRC-78

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USNRC REGION II  
ATLANTA, GEORGIA

CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT  
1986-90 - 9000,000 KW - UNITS 1 & 2  
WELDING DEFICIENCIES ON CLASS 1E 6.9KV CIRCUIT  
BREAKERS - ITEM 117

Dear Mr. O'Reilly:

Attached is our second interim report on the subject item which was deemed reportable per the provisions of 10CFR50.55(e) and 10CFR, Part 21, on March 11, 1983. CP&L is pursuing this matter, and it is currently projected that corrective action and submission of the final report will be accomplished by October 31, 1983.

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

Unit No. 1

Interim Report

Welding on 6.9kV Switchgear Breakers  
ITEM 117

May 31, 1983

Reportable Under 10CFR50.55(e)  
Reportable Under 10CFR21

SUBJECT: Shearon Harris Nuclear Power Plant/Unit No. 1  
10CFR50.55(e) and 10CFR Part 21 Reportable Deficiency.  
Welding for 6.9kV Class 1E switchgear breakers purchased  
under Purchase Orders NY-435112 and NY-435113 from  
Siemens-Allis, Inc.

ITEM: Welding in Class 1E 6.9kV switchgear breakers.

SUPPLIED BY: Siemens-Allis, Inc., Sanford, North Carolina.

NATURE OF DEFICIENCY: During 1980, the Switchgear Division of Siemens-Allis, Inc., Sanford, North Carolina, shipped 6.9kV switchgear breakers to the CP&L site on Purchase Orders NY-435112 and NY-435113. Welding in the breakers was not inspected by Ebasco's Vendor Quality Assurance representative prior to shipment, as the check plan did not include mechanical inspection requirements.

On January 10, 1983, Siemens-Allis furnished shop drawings so that an inspection of the welding could be performed. The inspection revealed that the weld lengths and sizing were not in conformance with the vendor shop drawings. It was also noted that the quality of the welding was poor.

Although the switchgear breakers on site and those seismically tested exhibit similar welding deficiencies, they were not similar enough to conclude that the equipment on site adequately reflected the same structural construction of the equipment seismically tested.

DATE PROBLEM OCCURRED: Refer to section above.

DATE PROBLEM REPORTED: February 11, 1983 - CP&L (N. J. Chiangi) notified the NRC (Ms. L. Watson) that this item was potentially reportable under 10CFR50.55(e) and 10CFR Part 21.

On March 11, 1983, CP&L (N. J. Chiangi) notified the NRC (Mr. C. Hehl) that this item was reportable under 10CFR50.55(e) and 10CFR Part 21.

SCOPE OF PROBLEM: The deficiency involves the twenty five Unit 1 Class 1E 6.9kV switchgear breakers.

SAFETY  
IMPLICATION:

Seismic qualification of the Class 1E switchgear assembly is required to assure that safety-related loads are capable of being powered during a seismic event.

REASONS  
DEFICIENCY IS  
REPORTABLE:

Failure of the supplier's QA program to control the welding on the switchgear breakers has resulted in breakers being shipped to the site which did not adequately reflect the same structural construction as that of the piece of equipment which has been seismically tested and whose test report has been accepted. Failure of the breakers to be seismically constructed could result in the loss of power supply to safety-related loads during a seismic event as a result of failure of the breaker.

CORRECTIVE  
ACTION:

1. Inspection of structural construction has been added to the VQA inspection check sheet for seismically-designed AC and DC distribution equipment yet to be shipped. Any equipment on site will be inspected by Site QA by sampling on each Purchase Order. In order to preclude a similar situation, suppliers of seismically-designed AC and DC distribution equipment have been requested to provide a written response describing the provisions in their quality assurance program, which would assure that the drawings and/or procedures used for manufacturing/fabrication of the equipment will reflect the actual structural and operational characteristics of the equipment being seismically qualified.
2. All Class 1E breakers at the site have been returned to the vendor. The vendor will fabricate new breakers to meet the following weld criteria:
  - a. All welds on the braces meet the acceptance criteria of Siemens-Allis.
  - b. Quantity of weld on connected pieces is at least the amount on the test unit.

FINAL  
REPORT:

Due to problems in producing quality welds, Siemens-Allis was not able to meet the originally projected completion date of May 31, 1983. The problems have been overcome and Siemens-Allis has begun to produce the required breakers.

A final report will be issued once the corrective action described in item 2 is completed. It is currently projected that the submittal date will be October 31, 1983.