

**CP&L**

Carolina Power & Light Company

P.O. Box 101, New Hill, N.C. 27562  
July 30, 1984

Mr. James P. O'Reilly  
United States Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Northwest (Suite 2900)  
Atlanta, Georgia 30323

NRC-249

CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT  
1986 - 900,000 KW - UNIT 1  
DEFECTIVE WELDS ON 480V SWITCHGEAR,  
PURCHASE ORDER NY-435171, ITEM 104

Dear Mr. O'Reilly:

Attached is our fourth interim report on the subject item, which was deemed reportable per the provisions of 10CFR50.55(e) on March 4, 1983. CP&L is pursuing this matter, and it is currently projected that corrective action and submission of a final report will be accomplished by April 1, 1985.

Thank you for your consideration in this matter.

Yours very truly,



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

RMP/jam

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 NO. 1

FOURTH INTERIM REPORT

REPORTABLE ITEM - SHNPP  
WELDING ON 480V SWITCHGEAR  
PURCHASE ORDER NY-435171  
ITEM 104  
DDR-1066

JULY 31, 1984

REPORTABLE UNDER 10CFR50.55(e)

SUBJECT: Shearon Harris Nuclear Power Plant Unit 1.  
10CFR50.55(e) reportable deficiency: Welding for 480V  
Class 1E switchgear and seismically-designed 480V  
Nonclass 1E switchgear supplied under Purchase Order  
NY-435171 from Brown-Boveri Electric Co.

ITEM: Welding in the transformer sections of the  
seismically-designed Nonclass 1E switchgear and the  
Class 1E switchgear.

SUPPLIED BY: Brown-Boveri Electric Company, Chalfont, PA.

NATURE OF  
DEFICIENCY: From April 1982 through July 1982, Brown-Boveri  
Electric Company shipped 480V switchgear to the Shearon  
Harris site on Purchase Order NY-435171. At CP&L's  
request, representatives from Brown-Boveri came to the  
site in late September 1982 with structural shop  
drawings so that CP&L QA would have a basis for a  
visual inspection of welds.

The inspection revealed welding deficiencies (one or  
more of the following deficiencies: undersized welds,  
undercut, incomplete fusion, overlap and craters) in  
the air terminal chambers, transformers, and a current  
limiting reactor. Analysis of the welds by  
Brown-Boveri Engineering determined the welding  
deficiencies in the air terminal chambers and the  
current limiting reactor were not serious in nature and  
that the structural integrity of the equipment would  
not be affected.

The welding deficiencies in the transformer have not  
been completely addressed by Brown-Boveri.

DATE PROBLEM  
OCCURRED: Refer to section above.

DATE PROBLEM  
REPORTED: March 4, 1983, CP&L (N. J. Chiang) notified the NRC  
(C. Hehl) that this item was reportable under  
10CFR50.55(e).

SCOPE OF  
PROBLEM: The deficiencies involve four Unit 1 Class 1E 480V  
switchgear transformers and two Nonclass 1E  
seismically-designed 480V switchgear transformers.

SAFETY  
IMPLICATION:

Seismic qualification of the Class 1E switchgear is required so that power to safety-related loads is maintained during a seismic event. Due to the proximity of Nonclass 1E switchgear to Class 1E equipment, seismic qualification (design) of the Nonclass 1E switchgear is required in order to assure that no switchgear component will dislodge and possibly damage safety-related components during a seismic event.

REASON DEFICIENCY  
IS REPORTABLE:

Failure of the supplier's QA program to control the welding on the switchgear has resulted in switchgear being shipped to the site which deviated from the supplier's own welding inspection criteria and structural drawings upon which the switchgear qualification is based.

CORRECTIVE  
ACTION:

Brown-Boveri has repaired major defective welds. Minor defects are to be modeled in the upcoming seismic test. Any corrective action will be determined after review of the seismic test reports. This testing was scheduled for completion by October 1983, but has been delayed due to Ebasco's concerns over the manner in which the equipment is to be tested.

FINAL REPORT:

A final report cannot be issued until the transformers are seismically tested and the qualification reports have been reviewed and accepted. Brown-Boveri has rescheduled the seismic test until November 1984. In order to allow enough time to receive and review the test reports, we must delay the projected submittal date for a final report until April 1, 1985.