



Carolina Power & Light Company

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P. O. Box 101, New Hill, N. C. 27562  
October 3, 1983

Mr. James P. O'Reilly  
United States Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Northwest (Suite 2900)  
Atlanta, Georgia 30303

NRC-126

CAROLINA POWER & LIGHT COMPANY  
SHEARON HARRIS NUCLEAR POWER PLANT  
1986-90 - 900,000 KW - UNITS 1 & 2  
SHOP WELDING DEFICIENCIES IN SEISMIC I PIPE HANGERS  
SUPPLIED BY BERGEN-PATERSON, ITEM 95  
UNDERSIZE SKEWED TEE FILLET WELDS ON SEISMIC I  
PIPE HANGERS, ITEM 72

Dear Mr. O'Reilly:

Attached is our second interim report on the subject items which were deemed reportable per the provisions of 10CFR50.55(e) and 10CFR, Part 21, on August 13, 1982 (Item 95) and November 5, 1982 (Item 72). Carolina Power and Light Company is pursuing this matter, and it is currently projected that corrective action and submission of the final report will be accomplished by December 1, 1984.

Thank you for your consideration in this matter.

Yours very truly,

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

RMP/sh

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

UNITS NOS. 1 AND 2

INTERIM REPORT NO. 2

SHOP WELDING DEFICIENCIES IN SEISMIC I  
PIPE HANGERS SUPPLIED BY BERGEN-PATERSON  
ITEM 95

UNDERSIZE SKEWED TEE FILLET WELDS ON  
SEISMIC I PIPE HANGERS  
ITEM 72

1983

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

SUBJECT:

Deficient shop welds on pipe hangers previously accepted by Bergen-Paterson (B-P) and Ebasco Welding Inspectors.

ITEM:

Seismic Pipe Hangers

SUPPLIED BY:

Bergen-Paterson Pipe Support Corporation, Laconia, New Hampshire

NATURE OF DEFICIENCY:

1. Missing and undersized welds
2. Cosmetic weld defects
3. Undersized skewed tee welds
4. Deficient welds accepted by B-P inspectors and Ebasco Vendor Quality Assurance (VQA) inspectors

DATE PROBLEM  
OCCURRED:

Prior to October 1, 1982

DATE PROBLEM  
REPORTED:

On August 13, 1982 CP&L (Mr. N. J. Chiangi) notified the NRC (Mr. A. Hardin) that this item (Item 95) was reportable under 10CFR50.55(e) and 10CFR, Part 21. In our November 5, 1982 letter, CP&L (Mr. R. M. Parsons) notified the NRC (Mr. J. P. O'Reilly) that this item (Item 72) was reportable under 10CFR50.55(e) and 10CFR, Part 21.

SCOPE OF PROBLEM:

Seismic Category I pipe hangers which were inspected at the source of fabrication prior to October 1, 1982.

SAFETY IMPLICATIONS:

Deficient welds could cause a safety-related pipe hanger to fail under seismic conditions. As a result, if not corrected, they could adversely affect the safe operation of this facility. However, no hangers evaluated to date with the above type deficiencies have been found to adversely affect the safe operation of this facility.

REASON THE DEFICIENCY  
IS REPORTABLE:

The conditions reported in Item 95 and Item 72 represent breakdowns in B-P and Ebasco QA programs which allowed supports to be shipped with welds which were not in accordance with design criteria. This incident was identified as reportable under 10CFR50.55(e) and 10CFR, Part 21, due to the extensive evaluation required and the breakdown in the QA programs.

CORRECTIVE ACTION:

1. Hangers with shop weld deficiencies were identified during the following processes:
  - A. Receipt Inspection.
  - B. Inspection in the warehouse prior to hanger issuance to the field.
  - C. Inspection in the field of installed hangers which had not been previously inspected by CP&L for shop weld deficiencies (does not include those hangers that were in Reinspection - See D).

CORRECTIVE ACTION (cont'd.):

- D. Reinspection of pipe hangers that were installed or partially installed and inspected prior to June 26, 1982. This includes the 347 hangers which were previously reinspected as part of the Corrective Action to NRC Report 50-400/82-03. The June 26, 1982 date was selected because the QC weld inspection program was expanded to include shop welds. 346 hangers which had been installed and inspected prior to June 26, 1982 were removed, voided, or declassified to non-seismic by a subsequent drawing revision and therefore were not reinspected.
2. 449 hangers with defective shop welds were identified by processes A and B (see above).

1862 hangers were reinspected by Processes C and D. 728 were identified with shop weld deficiencies.

Deficiencies were resolved as follows:

Welds were cut out.

Design drawing revisions were issued as a result of Engineering evaluation.

Welds were reworked and upgraded to meet the acceptance criteria of FCR-H-979.

Some hangers were on hold due to engineering problems which precluded rework at this time. These hangers will be dispositioned in accordance with the appropriate drawing revision when the engineering holds are removed.

3. Instruction measures have been established to control pipe hangers which have not been installed but were received prior to October 1, 1982. We have taken the option to inspect shop welds prior to issue from the warehouse or to inspect shop welds at the same time field welds are inspected. Defective welds will be identified on DDR's for control and evaluation.

PREVENTIVE MEASURES  
TAKEN TO AVOID FURTHER  
NONCOMPLIANCE:

1. Field Change Request (FCR) H-979 was developed and issued to provide weld inspection acceptance criteria for both field and shop welds based on the AWS D1.1 code and B-P design criteria.
2. Ebasco VQA began performing in-process inspections and 100% inspection of hanger welds on October 1, 1982. This is to be performed throughout the remainder of the B-P purchase order.

PREVENTIVE MEASURES  
TAKEN TO AVOID FURTHER  
NONCOMPLIANCE (cont'd.)

3. Ebasco VQA management regularly visits the B-P Laconia facility to confer with the Ebasco VQA representative and to witness the VQA inspector's activities.
4. B-P welders and inspectors and Ebasco VQA inspectors have received additional training in weld acceptance criteria.
5. 100% shop weld inspection is presently being performed on site for hangers received from B-P to ensure this problem does not reoccur.

FINAL REPORT:

Corrective action has been completed on all active hangers. Those hangers on engineering hold will be reinspected and reworked when they become active again, or they will be cancelled if they are voided. For this reason, we cannot close this item until December 1, 1984.