



Carolina Power & Light Company

September 17, 1982

FILE: SH N-2/18
ITEM 63

CQAD 82-1605

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

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NOS. 50-400, 50-401
THREADED STUDS WITH INSUFFICIENT THREADED
ENGAGEMENT INTO EMBEDDED STRIP PLATES

Dear Mr. O'Reilly:

Attached is an interim report on the subject item which was deemed reportable per the provisions of 10CFR50.55(e) on November 10, 1981. CP&L is pursuing this matter, and it is currently projected that corrective action and submission of the final report will be accomplished by January 21, 1983. Thank you for your consideration in this matter.

Yours very truly,

N. J. Chiangi - Manager
Engineering & Construction
Quality Assurance/Quality Control

NJC/gea (206)
Attachment

cc: Mr. G. Maxwell W/A
Mr. V. Stello (2) W/A

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CAROLINA POWER & LIGHT COMPANY
SHEARON HARRIS NUCLEAR POWER PLANT

UNITS NO. 1 AND 2

INTERIM REPORT
September 15, 1982

THREAD ENGAGEMENT OF THREADED STUDS
INTO EMBEDDED STRIP PLATES

Reportable Under 10CFR50.55(e)

SUBJECT: Shearon Harris Nuclear Power Plant/Units No. 1 and 2 10CFR50.55(e), reportable deficiency. Thread engagement of threaded studs into embedded strip plates.

ITEM: Improperly installed threaded studs on embedded strip plates. These tapped strip plates and threaded studs have been used in many cases in lieu of strip plates with welded-on Nelson headed studs.

SUPPLIED BY: Not a supplier-related deficiency. The studs and strip plates were assembled in the field.

NATURE OF DEFICIENCY: The deficiency involves Seismic Category I embedded strip plates with screwed-in studs that have insufficient thread engagement. These screwed-in studs are used in lieu of welded-on Nelson headed studs. The deficient plates/studs were found after concrete placements and acceptance of the placements.

DATE PROBLEM WAS CONFIRMED TO EXIST: October 13, 1981

DATE PROBLEM REPORTED: October 13, 1981, Mr. N. J. Chiangi notified the NRC, Region II (Mr. R. Butcher), that the item was potentially reportable. November 10, 1981, Mr. N. J. Chiangi notified the NRC, Region II (Mr. R. Butcher), that this item was reportable per the provision of 10CFR50.55(e).

SCOPE OF PROBLEM: Approximately 1300 of the strip plates to be used with screwed-in studs have been ordered. To date, all inspection has been completed in the containment, fuel handling, reactor auxiliary, reactor auxiliary-common, diesel generator, diesel fuel oil storage tank, tank 1 and 2 buildings, intake and screening structures. A large number of plates that have threaded studs with improper thread engagement have been found. Also, hangers have been found welded to plates that have threaded studs with improper thread engagement.

SAFETY IMPLICATION: Pipe, cable tray, and HVAC hangers, as well as other miscellaneous items, attach to these plates. Plates with studs not having proper thread engagement will possibly be overstressed in normal operation or during a seismic event. Sufficient investigation has not been conducted to actually evaluate the loading on the identified plates.

REASON DEFICIENCY IS REPORTABLE: Reportable due to the magnitude of the problem plus the extensive evaluation and/or rework required.

CORRECTIVE ACTION:

Appropriate site work procedures have been revised requiring notification of site engineering personnel prior to attaching any item to an embedded plate with screwed-in studs. All the plates in question have holes in them for the studs and, therefore, are readily identifiable. This action will prevent a plate from being overlooked during the construction period. Plates already having attachments have been identified and are being submitted to the engineer for evaluation.* Field testing for shear resistance of the plates with various engagement lengths has been completed, so once the information is transmitted to the engineer, an evaluation can be completed. To eliminate attachments to these plates once the plant becomes operational, operating personnel have agreed to implement inspection of the plates in their procedures prior to making any attachments. In addition, prior to turnover of the plant, the plates with insufficient thread engagement will be identified by using either a sticker or paint.

FINAL REPORT:

A final report will be issued once the plates having attachments are evaluated and reworked, if required. It is currently projected that the submittal date will be January 21, 1983.

*In the last interim report it was reported that the attachments had been identified and were being evaluated per PW-AS-1498, 1510R1 and 1620. This was a true statement, but the magnitude of these documents were broad and lacked the details necessary to perform an engineering evaluation. For this reason, these documents were voided and a reinspection of the plates, having attachments, was again performed. This information is presently being compiled and permanent waivers are being written.