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FLORIDA POWER & LIGHT COMPANY

September 30, 1982
L-82-422

Mr. James P. O'Reilly
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

RE: St. Lucie Unit 2
Docket No. 50-389, 10 CFR 50.55(e), 82-017
Undersize Fillet Welds

Dear Mr. O'Reilly:

On August 31, 1982, Florida Power and Light Company (FPL) notified the Region II Office of Inspection and Enforcement in accordance with the requirements of 10 CFR 50.55(e) of a potential deficiency regarding undersized fillet welds. Attached please find our final resolution of this issue.

Very truly yours,

Robert E. Uhrig
Vice President
Advanced Systems and Technology

JO/cab

Attachments

DRAFT RESPONSE TO NRC ON UNDERSIZED FILLET WELDS

I. SUMMARY:

A potential deficiency was identified in that socket welds were undersized. These welds had previously passed QC inspection. In response to several USNRC inspections in early 1982, site QC performed a reinspection of approximately 10% of the socket welds on ASME section III, Class 1, 2 and 3 piping. The welds were randomly selected, 12% of which were found to be undersized.

FP&L notified the NRC of this deficiency existing at the St. Lucie Unit 2 site as potentially reportable under 10 CFR 50.55(e) on August 31, 1982. This final report is submitted to advise the NRC of the description and corrective action that is being taken.

II. DESCRIPTION:

In the early part of 1982, the USNRC inspected a number of small bore socket welds and found them undersized according to ASME section III. These welds had already been inspected and found acceptable by QC. Subsequently, site QC performed a reinspection of 1119 Class I, II, and III socket welds, including 25 flange and 1094 fitting welds. Of those reinspected, 15 flange welds were found undersized (60%) and 127 (12%) fitting welds were undersized.

To ensure the correct reinspection of all Class I, II and III socket welds, QC has added Technique 9 to QI 9.1, "Visual Inspection of Welds". This technique clarifies the inspection requirements for determining weld size and contour. Fillet gauges, rulers, welding institute gauges, etc. are to be used to measure the size of the weld as accurately as possible. Use of this technique will identify all welds requiring repair and will alleviate future problems with undersized fillet welds.

III. CORRECTIVE ACTION:

The following actions are being taken by FP&L to correct the deficiency, and to ensure the correct construction and inspection of socket welds at St. Lucie Unit 2:

1) Revise the inspection program to require measurements of socket welds for Class I, II, and III piping (this action was completed on 6/15/82).

2) Commence reinspection of all flange and socket fitting welds not inspected in the initial sampling. The reinspection is being performed by a specially constituted team from Site QC, solely dedicated to this program. Using the techniques described in section II, this team, upon completion, will have reinspected 100% of all flange and socket fitting welds. Based on the findings of the reinspection program, undersized fillet welds will be dispositioned as follows:

A) All undersized flange welds will be repaired.

B) All undersized socket fitting welds on schedule 40 piping will be repaired.

C) All undersized welds on pipe greater than 1" in Class I systems will be repaired.

D) All other undersized welds will be analyzed for applicability under ASME Code Case N-316.

E) All undersized welds found unacceptable per the analysis in Step D and resulting in additional or revised hangers/restraints or changing the postulated break location in high energy lines will be repaired.

3) The reinspection, analysis and repair will be on a priority basis to avoid impacting major milestones. The estimated completion date for this task is January 15, 1983.

Since the undersized fillet welds were not identified by Quality Control during routine in-process inspections, the deficiency was evaluated to determine if it represented a significant breakdown in the quality assurance program. It was determined the incident does not constitute a significant breakdown since QI 9.1, as written during the time of the inspections, did not require the use of measuring devices during visual inspection unless the weld was obviously grossly undersized. None of the welds presently identified as undersized fits this catagory.

IV. SAFETY IMPLICATIONS:

We have evaluated this concern and determined that it is a significant deviation from our commitment to build according to the ASME code as stated in the FSAR. Though most of the welds in question have successfully passed hydro requirements, the possibility of a weld failing under a seismic event is a significant concern. Therefore, we have deemed this concern to be reportable under 10 CFR 50.55(e).

V. CONCLUSION:

Corrective action as indicated in section III of this report has been undertaken. This closes out this item for St. Lucie Unit 2 with regards to the NRC's reporting requirements.