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AUTH.NAME AUTHOR AFFILIATION
STALL,J.A. Florida Power & Light Co.
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SUBJECT: Requests approval of interim relief request 26 re repair requirements for Class 2 ECCS piping,per 10CFR50.55a(a)(3) & 50.55a(g)(iii).Alternative actions apply guidance of GLs 91-18 & 90-05 & ASME Code Case N-513.Evaluation,encl.

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Florida Power & Light Company, 6351 S. Ocean Drive, Jensen Beach, FL 34957

April 7, 1999

L-99-90
10 CFR 50.4
10 CFR 50.55a

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

RE: St. Lucie Unit 2
Docket No. 50-389
In-Service-Inspection Plan
Second Ten-Year Interval
Interim Relief Request 26

Pursuant to 10 CFR 50.55a(a)(3) and 50.55a(g)(5)(iii), Florida Power and Light Company (FPL) requests approval of Interim Relief Request 26, *Repair Requirements for Class 2 ECCS Piping*, located on the Refueling Water Tank (RWT) suction piping to the Emergency Core Cooling System (ECCS) pumps. Enclosed is Interim Relief Request 26. The alternative actions discussed in interim relief request 26 meet the intent of applying the guidance of NRC Generic Letter 91-18, NRC GL 90-05 and ASME Code Case N-513 to moderate energy ASME Class 2 piping. Attachment 1 of Interim Relief Request 26 is Engineering Evaluation PSL-ENG-SEMS-98-102, Rev. 2, which contains APTECH Calculation AES-C-3566-1, *Evaluation of Corrosion Degradation of 24-inch ECCS Piping at St. Lucie Unit 2*, Revision 1 dated April 7, 1999. Attachment 2 of Interim Relief Request 26 is Condition Report 99-0445 containing the interim engineering disposition of the ECCS suction header operability. Attachment 3 of Interim Relief Request 26 is letter CSI-NDE-99-012, *Characterization of Identified Leaks on PSL-2 CS-2 & CS-3*. FPL discussed this issue in a conference call with NRC Office of Nuclear Reactor Regulation and Region II personnel on April 6, 1999.

A code repair or replacement will be accomplished by removing one header from service at a time. The code repair will be completed by April 21, 1999. The proposed alternatives provide an acceptable level of quality and safety, and compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Please contact us if there are any questions about this submittal.

Very truly yours,

J. A. Stall
Vice President
St. Lucie Plant

JAS/GRM
cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

120009

St. Lucie Unit 2
SECOND INSPECTION INTERVAL
INTERIM RELIEF REQUEST NUMBER 26

A. COMPONENT IDENTIFICATION:

ASME Section III, Class 2 Emergency Core Cooling (ECCS) Suction Piping at Florida Power & Light Company's (FPL) St. Lucie Unit 2.

B. CODE REQUIREMENT:

ASME Section XI, 1989 Edition with no Addenda, paragraph IWC-3132 requires that components whose examination reveals relevant conditions described in the standards of Table IWC-3410-1, shall be unacceptable for continued service unless such components meet the requirements of IWC-3132.1, IWC-3132.2, IWC-3132.3 or IWC-3132.4.

C. RELIEF REQUESTED:

Pursuant to 10 CFR 50.55a (g)(5)(iii), FPL requests interim relief from the repair and/or replacement requirements of the ASME Boiler and Pressure Vessel Code, Section XI, 1989 Edition, Articles IWA/IWC-4000 and IWA/IWC-7000. This would authorize the facility to operate with through-wall leaks in ASME Class 2 piping until a Code repair and/or replacement can be accomplished. FPL proposes to complete the Code repairs by April 21, 1999.

D. BASIS FOR RELIEF:

FPL has determined, based upon results of current observation and evaluation of the ECCS suction piping, that compliance with the repair and/or replacement requirements of ASME Section XI, within the time frame allowed by plant Technical Specifications, would be impractical, and would create a undue hardship on FPL, without a compensating increase in quality or safety. As discussed with the NRC on April 6, 1999, FPL applied the guidance in NRC GL 91-18, NRC GL 90-05, and ASME Code Case N-513 to evaluate the functionality of the moderate energy ASME Class 2 ECCS piping.

The alternative actions discussed below will assure a continued level of quality and safety of the unit until a code repair/replacement can be made.

E. ALTERNATIVE ACTIONS:

In lieu of an immediate ASME Section XI Code repair and/or replacement, FPL proposes to apply NRC GL 91-18, NRC GL 90-05, and ASME Code Case N-513 for moderate energy Class 3 piping to the operability assessment of the ASME Class 2 ECCS suction piping. The ECCS piping has a maximum operating pressure of 30 psig and a maximum operating temperature of 120^{0}F and therefore falls under the definition of moderate energy piping. Consistent with NRC GL 91-18, NRC GL 90-05, and ASME Code Case N-513, the following actions are being implemented:

1. A flaw evaluation was performed to ASME Section XI, Appendix C, methods and acceptance criteria. The allowable through-wall flaw lengths and estimated flaw growth during service were computed. The conservative flaw growth analysis indicates that adequate safety margin will be maintained for at least one cycle of operation. The structural integrity of the piping is acceptable for the design basis loading conditions based on leak-before-break. Therefore, leakage detection in the areas affected by the corrosion degradation will be sufficient to maintain pipe integrity. Attachment 1 contains APTECH Calculation, *Evaluation of Corrosion Degradation of 24-inch ECCS Piping at St. Lucie Unit 2.*

St. Lucie Unit 2
SECOND INSPECTION INTERVAL
INTERIM RELIEF REQUEST NUMBER 26

2. Condition Report 99-0445, Interim Disposition, (Attachment 2) provides the operability assessment for the subject piping and the ECCS subsystems.
3. Flaw geometry was characterized to the extent practical by volumetric examination and physical measurement (Attachment 3).
4. Augmented visual examinations of the affected areas of the piping have been performed.
5. The leakage will be observed daily via walkdowns to confirm analysis conditions used in the evaluation remain valid.
6. The ASME Code required repair/replacement will be completed by April 21,1999.

F. IMPLEMENTATION SCHEDULE:

The alternative actions addressed in Section E. of this relief request commenced on April 6, 1999 and will be completed by April 21, 1999.

G. ATTACHMENTS TO THE RELIEF REQUEST:

Attachment 1: Engineering Evaluation PSL-ENG-SEMS-98-102, Revision 2, dated April 7, 1999, including APTECH Calculation AES-C-3566-1, Revision 1 dated April 7, 1999.

Attachment 2: Condition Report 99-0445, Interim disposition, dated April 7, 1999.

Attachment 3: Letter CSI-NDE-99-012, Characterization of Identified Leaks on PSL-2 CS-2 & CS-3 dated April 7, 1999.