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 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251
 AUTH. NAME AUTHOR AFFILIATION
 CONWAY, W.F. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 881117 ltr re violations noted in Insp Repts
 50-250/88-28 & 50-251/88-28. Corrective action noted.

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FPL

P.O. Box 14000, Juno Beach, FL 33406-0420

DECEMBER 21 1988

L-88-540

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

Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Reply to Notice of Violation
Inspection Report 88-28

Florida Power & Light Company has reviewed the subject inspection report and a response is attached.

Very truly yours,

C. Ashton Relf WFC

W. F. Conway
Senior Vice President - Nuclear

WFC/RHF/gp

Attachment

cc: Malcolm L. Ernst, Acting Regional Administrator,
Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

8812300059 881221
PDR ADCK 05000250
Q PNU

IE01
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ATTACHMENT

VIOLATION 50-250, 251/88-28-01

Finding:

10 CFR 50 Appendix B, Criterion III requires measures be established to assure that applicable regulatory requirements and design basis are correctly translated into procedures and instructions. These measures shall provide for checking the adequacy of design.

Contrary to the above, the measures to assure that design basis are adequately transmitted to procedures and instructions were not adequate in that: the numerical value for "Fluid Velocity" used in the stress calculation for component cooling water (CCW) thermowell Nos. TI-4-663A-F in Bechtel Power Corporation Calculation 17712-183-J01, "Component Cooling Water Heat Exchanger Replacement, Unit 4 - thermowell stress analysis - local TIs" Revision 0 originated September 13, 1988, checked September 13, 1988, and approved September 14, 1988, could not be explained or supported by the engineer who originated the calculation, the checker who reviewed the calculation, or the engineer who approved the calculation.

Response:

- 1) FPL concurs with the finding.
- 2) The reason for the violation is personnel error. The originator of the calculation cited made a numerical error and the calculation checker failed to detect the error. The error related to the value used for flow velocity input to the computer program to calculate thermowell stresses. It was stated in the calculation that the velocity was derived from the mass flow rate (with specific reference to the source of this data) and the inside diameter of the nozzle. The originator of the calculation was requested by the inspector to recreate the velocity calculation (indicated as 6.139 ft/sec in the calculation). However, he was unable to do so, calculating values between 12 and 15 ft/sec (depending on the flow rate and nozzle diameter used). The inspector requested an explanation of the discrepancy, but none could be established other than a numerical error occurred when the calculation was originally prepared.

Bechtel Procedure EDPI 4.37-10, Rev. 10 requires that the checker verify numerical calculations or verify results by alternate documented methods. Accordingly, the calculation checker appears not to have appropriately checked the velocity calculation described above.

- 3) a. The calculations in question (Calculation No. 18712-183-J01 for local TI thermowells and Calculation No. 18712-183-J02 for RTD thermowells) have been revised. The maximum stress intensity in the subject thermowell shanks derived in the original calculations when utilizing the incorrect fluid velocity was approximately 106 psi and 110 psi for the 0.75 inch diameter portion of Calculations 18712-183-J01 and 18712-183-J02,

respectively, and 126 psi for the 0.5 inch diameter portion of both calculations (versus an allowable of 22,500 psi). The revised calculations reflect thermowell shank stress intensity of approximately 550 psi and 570 psi for the 0.75 inch diameter portion of Calculations 18712-183-J01 and 18712-183-J02, respectively, and 213 psi for the 0.5 inch diameter portion of both calculations (versus an allowable of 26,250 psi) when utilizing the corrected fluid velocity figure.

- b. Other Turkey Point calculations which were verified by the checker involved with this calculation have been rechecked by a third party and found acceptable.

4) The following actions have been completed as a result of this occurrence:

- a. The checker of this calculation has been retrained in the application of the Design Calculation Procedure (EDPI 4.37-10) as well as other relevant engineering procedures with which he may be involved.
- a. Other Bechtel engineering personnel on the Turkey Point Project have been specifically re-advised of the checker responsibilities delineated in the project procedure.

5) Full compliance was achieved on December 9, 1988.

VIOLATION 50-250, 251/88-28-02

Finding:

10 CFR 50, Appendix B, Criterion X requires the establishment of an inspection program to verify conformance with documented instructions and procedures for accomplishing activities affecting quality. Work activities shall not proceed past holdpoints without the consent of authorized personnel. The above is implemented by Florida Power and Light (FP&L) Procedure QP 10.3, Revision 6, "Inspection and Surveillance", Paragraph 5.8.1, and FP&L Administrative Site Procedure ASP-2, Rev. 4, Paragraph 4.12. Mechanical Installation List No. MIL 88-006M, Revision 1, and Process Sheet No. P.S. 88-206, have been identified as the work and inspection controlling documents for the replacement of the CCW heat exchangers. Procedure ASP-2, Paragraph Nos. 5.3.4 and 5.5.3, requires Project Field Engineers (PFEs) and Quality Control (QC) inspectors to sign-off process sheet "hold-points" within 24 hours of the completion of the work activity or inspection.

Contrary to the above, the licensee has failed to establish an effective inspection program for the installation of the CCW heat exchangers as evidenced by the following:

1. Both PS 88-206 and MIL 88-006M, state that sequencing is not required. Both documents contained "hold-points" which the licensee permitted to be accomplished out of sequence.
2. Two examples were noted where "hold-points" were signed off inadvertently when in point of fact, the required inspections had not been accomplished/



completed. One case resulted in the "hold-point" being missed (only to be discovered during later document review).

3. Ten examples were noted where the PFEs or QC inspector sign-offs failed to comply with the 24 hour timeliness window, for "hold-point" sign-off in some cases by as much as ten calendar days.
4. The dates accompanying the PFE sign-off for work activity "hold-points" were, in some case, the date of the completion of the work activity and not the date of the actual sign-off itself.
5. Data intended to be included in the process sheet by the QC inspector, at the time of sign-off, was included by others during data review after the fact.

Response

- 1) FPL concurs with the finding.
- 2) The overall reason for the finding was failure to follow procedural requirements. The discussions below refer to the corresponding items identified in the finding above.

Item 1

The procedure which controls preparation of Process Sheets (PS) and Mechanical Process Installation Lists (MPIL) does not provide a mechanism for inspection points that are not required to be performed in sequence. The examples identified were inspection points that did not require sequencing. However, once labeled as hold points these inspections should have been completed prior to proceeding with the work.

Item 2

The steps on the PS/MPIL were signed off in error by the inspector. However, the error was identified and corrected during the final verification of the Inspection Reports versus the PS/MPIL. This final verification forms a part of the QC process.

Item 3

The PFE maintained a copy of the PS in the field. Based on discussions with construction and QC personnel, it is believed that the PFE signed the field copy of the PS after completing the inspection, but failed to sign the original. The inspector believed that the PFE sign-off was required prior to his sign-off. When the PFE did sign off on the original PS, he entered the date from the field copy of the PS. Following PFE sign-off, the QC inspector signed off on the PS, entering the sign-off date.

Item 4

The procedures controlling the PS/MPIL's provide no specific direction as to whether the sign-off date is to be the date of completion of the work

activity or the date of the actual sign-off. The PFE maintained a copy of the PS in the field. Based on discussions with construction personnel, it is believed that PFE signed the field copy of the PS after completing the inspection, but failed to sign the original. When the PFE did sign the original PS, he entered the date from the field copy.

Item 5

Through oversight, the QC inspectors neglected to include some information on the PS. However, the appropriate information was included in the Inspection Report. As in item 2, these errors were identified and corrected at the final verification and the information was transferred from the Inspection Report to the PS. As noted in item 2, the final verification forms a part of the QC process.

- 3)
 - a. A memorandum was issued to the Project Field Engineers to emphasize that all Field Engineering inspections must be signed off within 24 hours after the work activity is completed. The memorandum also requires that the sign-off date be the actual date of the sign-off. This memorandum was issued October 24, 1988.
 - b. A memorandum was issued to Construction QC inspectors emphasizing the procedural requirements for timely sign-offs, fully completing hold point activities before sign-off and fully recording supporting data entries where required. This memorandum was issued October 25, 1988.
- 4)
 - a. A new Administrative Site Procedure will be issued to address the use of Process Sheets and Installation Lists. This procedure will provide clear direction on the use of hold points and when sequencing is required. The procedure will also provide criteria for an "inspection point" for Process Sheets and Installation Lists. Training sessions will be conducted for Backfit Construction Field Engineers and QC inspectors whose activities are controlled by Process Sheets and Installation Lists.
 - b. QC will monitor compliance with the action described by 3) above on a weekly basis. This monitoring will be performed in order to determine the effectiveness of the memorandums and will be continued at least until the action described by 4a is completed. This monitoring may continue beyond completion of action 4a, depending on the results obtained.
- 5) Full compliance for the actions described in 4a above will be achieved by February 15, 1989.