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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

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SUBJECT: Responds to NRC 880125 ltr re violations noted in Insp Repts  
 50-250/87-08 & 50-251/87-08.

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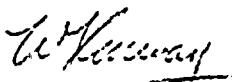
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Gentlemen:

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Inspection Report 87-08

Florida Power & Light Company (FPL) has reviewed the subject inspection report and the separate NRC Notice of Violation issued on January 25, 1988 and a response is attached. Also attached is additional information regarding Unresolved Item 87-08-01 for your review and consideration. The submittal date for this report was revised with the concurrence of the NRC Region II Staff.

Very truly yours,

  
W. F. Conway  
Acting Group Vice President  
Nuclear Energy

WFC/RG/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator,  
Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

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ATTACHMENT

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Inspection Report 87-08

Finding A:

10 CFR 50.49(f) and (k) respectively require, in part, that (1) each item of electric equipment important to safety shall be qualified by testing of, or experience with identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable; and (2) electric equipment important to safety which was previously qualified in accordance with "Guidelines for Evaluating Environmental [Qualification of Class 1E Electrical Equipment in Operating] Reactors" dated November 1979 (DOR Guidelines) need not be requalified to 10 CFR 50.49. DOR Guidelines, Section 5.2.2, allows the use of type tests to qualify equipment important to safety if the equipment is identical in design and material construction to the test specimen.

Contrary to the above:

1. At the time of the inspection, Raychem splice insulation sleeves for qualified solenoid-operated valves (SOVs) (Tag Nos. SOV-4-2914, 2916 and 2918) were not installed in a condition similar to that in which they were tested in that the splices for SOV-4-2914 and 2916 had insufficient overlap over wire insulation and were installed over the SOV pigtailed braided jacket. One splice for SOV-4-2918 was bent beyond minimum tested bend radius and was also installed over a braided pigtail jacket.
2. At the time of the inspection, the qualification documentation package for 3M Scotch 23/Scotch 70 tape insulation did not establish similarity between tested and installed tape splices.

Response:

- 1 FPL concurs with the finding.
- 2.1 The reason for this finding is that FPL Raychem splice installation procedures were ambiguous in that certain key requirements were not emphasized. The importance of these requirements had not been



previously emphasized by the vendor. FPL at the time of the inspection had preliminary qualification test reports that indicated the above noted splices configuration would be able to be qualified. Subsequent to the inspection completed test reports were released to FPL and the splices in question were found to be qualified.

- 2.2 The reason for this finding is FPL had qualified the materials contained in the taped splices but not the taped splice configuration. This method of qualification is allowed per DOR Guidelines. The assumption of the Doc Pac was that qualification of tape splices was not unique to a particular method of application. Therefore, if a taped splice passed post installation testing, the splice was acceptable for the application. The tape splice would not degrade to failure during or after a design basis event (DBE). During the inspection, FPL was informed that a similarity analysis between what materials were qualified and what installation methods were used in the field would be required to be included in the Doc Pac.
3. FPL initiated an inspection and enhancement program for all EQ splices to verify that splices were installed in accordance with manufacturers recommendation which simulated test configurations. The result of this program was the identification and if required, the enhancement of all EQ splices inside Unit 3 and Unit 4 containments. EQ splices outside Unit 3 containment have been inspected and if required, enhanced. All EQ splices outside Unit 4 containment have been inspected and by a separate qualification package are qualified until next refueling. Those splices requiring enhancement for 40 year qualification will be completed at the next refueling. This program has been completed with the result that all EQ splices are verified to be qualified.
4. Procedure GMI 102.2 (Raychem Sleeve Installation) was revised and new procedure GME 102.2 (Raychem Sleeve Installation) was issued. These procedures provide detailed criteria on the selection and installation of Raychem splices which will result in the installation of these splices in an approved standard configuration. A similarity analysis has been incorporated in the qualification documentation for 3M tapes.



5. All required EQ terminations were qualified prior to the return to power from the Unit 3 refueling outage on September 12, 1987 and the Unit 4 conoseal repair outage on July 8, 1987.

The documentation review of the plant change and modification packages generated to complete the inspections, evaluations and enhancements is in the close-out process and will be completed for each unit at the end of its next refueling outage.

Procedure GMI 102.2 was revised on October, 6 1987.  
Procedure GME 102.2 was issued on January 7, 1987.

Finding B:

10 CFR 50, Appendix B, Criterion V and the licensee's approved Operational Quality Assurance Program (FPLTQAR I-76A) Section 5.1 requires that activities affecting quality of nuclear safety-related structures, systems and components shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

10 CFR 50.49(1) requires that replacement equipment must be qualified in accordance with the provisions of this section unless there are sound reasons to the contrary.

Contrary to the above, at the time of the inspection, the licensee did not have adequate procedures to insure that DOR qualified tape splices would be upgraded if replaced on equipment required to be qualified to 10 CFR 50.49 requirements.

Response:

- (1) FPL concurs with the finding.
- (2) The reason for this finding is that prior to this inspection, tape splices had not been considered as a unique piece of equipment, but rather as part of a piece of equipment. Therefore no specific procedure requirement was in place to upgrade tape splices.
- (3) Administrative Procedure O-ADM 704 "Environmental Qualification Maintenance Index" refers to the tape splice Doc Pac 28. The subject Doc Pac has been revised to include 10 CFR 50.49 qualified tape splices.
- (4) General Maintenance Procedure GMI 102.6, "Low Voltage Splice Taping," was issued to insure that only 10 CFR 50.49 tape splices may be installed.
- (5) The Doc Pac was revised on July 10, 1987. Procedure GMI 102.6 was issued on October 27, 1987.





Finding C:

10 CFR 50.49(f) and (k) respectively require, in part, that (1) each item of electric equipment important to safety shall be qualified by testing of, or experience with identical or similar equipment, and the qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable; and (2) electric equipment important to safety which was previously qualified in accordance with "Guidelines for Evaluating Environmental [Qualification of Class 1E Electrical Equipment in Operating] Reactors" dated November 1979 (DOR Guidelines) need not be requalified to 10 CFR 50.49. DOR Guidelines, Section 5.2.2, allows the use of type tests to qualify equipment important to safety if the equipment is identical in design and material construction to the test specimen.

Contrary to the above, limitorque valve actuators required to be qualified at PTN were not in an installed condition similar to that in which they were tested after the 10 CFR 50.49 qualification deadline of March 31, 1985 and until the units were shutdown before the Generic Letter 85-15 deadline of November 30, 1985, in that FPL did not have assurance that the Texaco Marfak grease which had been added to actuator main gear cases was tested with the actuators or, if not, that it was qualified separately.

Response:

- (1) FPL concurs with the finding. Bechtel letter SFB-4653 dated September 10, 1987 transmitted Revision 2 of the qualification report for the Marfak O grease [Texaco Marfak O Grease EQ Report Rev. 2 dated 9/10/87] to Power Plant Engineering. This report was generated from information that was on file at the time of the audit and was simply gathered together and put into the format requested by the NRC. The report concludes that qualification of the Marfak grease could have been demonstrated at the time it was used at Turkey Point.
- (2) The reason for this finding was that there was no formal program to ensure that only qualified grease was used in the MOV's.
- (3) FPL replaced all Texaco Marfak grease on both Unit 3 and Unit 4 with Exxon EP0 or EP1 which are supported by documented test results.

- (4) Procedure O-PMM 102.1, "Limotorque Operators: General Inspection and Lubrication," was issued to control general inspection and lubrication of limitorque operators.
- (5) All Limitorque Motor Operated Valves were cleaned and relubricated with Exxon Nubula EPO or EP1 on Unit 3 and Unit 4 during the last week of November 1985.

Procedure O-PMM 102.1 was issued on August 11, 1987.



FPL provides the following information concerning Unresolved Item 50-250,251/87-08-01, "Lack of Cable Traceability."

Unresolved Item

Contrary to paragraphs (f) and (k) of 10 CFR 50.49 and sections 5.2.2 and 5.2.6 of the DOR Guidelines, FPL could not show that field-run cables to two Limitorque motorized valve actuators (MOVs) (Tag Nos. MOV-3-880B and MOV-40880B) were qualified in that they were not traceable to qualified cable because they had incorrect cable tag numbers and no other identifying markings in the MOV.

Response:

The field-run cables to MOV-3-880B and MOV-4-880B were incorrectly identified by Cable Tags. This was verified by tracing each field cable from its source to its end device. The tracing methods used included continuity testing and function testing of the subject MOV. The results of this verification indicated that the field cables of MOV-3-880B and MOV-4-880B were routed correctly, but were mislabeled.

A further investigation was conducted to determine if the type of cable required had been used. A physical investigation revealed only that the field cables had been marked with paint to indicate channel separation. No distinctive indication was noted on the cable sheath as to origin or manufacturer. A search of Turkey Point Plant construction records (cable pull cards) revealed the following information on cables used for MOV-3-880B and MOV-4-880B.

- a) Type of cable used (N20)
- b) Length of cable required
- c) Routing of cable
- d) Date cable pulled
- e) Signed

Cable Code N20 represents an Okonite cable which is environmentally qualified for this application as documented in TP.EQ.DOC.PAC. 19.0.

In conclusion, when identification of field cable is in question, verification of field cable type can be assured by review of signed pull cards. The pull cards for Turkey Point are on file at our record storage facility in Riviera Beach. The availability of signed pull cards should resolve this unresolved item.

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