FLORIDA POWER & LIGHT COMPANY

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January 17, 1985
L-85-26

Mr. James P. O'Reilly
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
101 Marietta Street N.W., Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Inspection Report 250-84-28 and 251-84-29 Supplement

Florida Power and Light Company has reviewed the NRC letter dated December 18, 1984, which included the NRC staff evaluation of FPL's response to Inspection Report 84-28/29. As requested in that letter, a revised response is attached.

There is no proprietary information in the report.

Very truly yours,

J. W. Williams, Jr.
Group Vice President
Nuclear Energy Department

JWW/JA/ms
Attachment

cc: Harold F. Reis, Esquire

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ADDITIONAL INFORMATION REQUIRED OF NOVEMBER 16, 1984 RESPONSE

1) Response 3c to finding 2a does not address the conflicting values of equilibrium Samarium (Sm) that were identified in Inspection Report Nos. 50-250/84-28 and 50-251/84-29.

   Response - See revised response 3c to finding 2a.

2) Response 3f to finding 2a does not address approved procedures which will prevent the use of inaccurate values for Xenon (Xe) and Sm from the Digital Data processing system (DDPS), including identifying to the operator when the DDPS values are not accurate.

   Response - See revised response 3f to finding 2a.

3) The response to violation 2 did not address those specific areas of concern itemized in paragraphs G and I in the details of Inspection Report Nos. 50-250/84-28 and 50-251/84-29. In addition, it is requested that all discrepancies that precluded the applicable procedures from being accurate be addressed in a supplemental response.

   Response - See revised supplement to 3c to finding 2b.

ATTACHMENT

Re: Turkey Point Units 3 and 4
Docket No. 50-250, 50-251
IE Inspection Report 250-84-28 and 251-84-29 Supplement

FINDING I:

Technical Specification 6.8.1 requires that written procedures and administrative policies shall be established, implemented, and maintained that meet or exceed the requirements and recommendations of Section 5.1 and 5.3 of ANSI N18.72 and Appendix A of USNRC Regulatory Guide 1.33.

Off Normal Operating Procedure (ONOP) 0208.1, "Shutdown Resulting From Reactor Trip on Turbine Trip", in Appendix A, requires that the time delay between reactor trip relay dropout and reactor trip breaker opening be no more than 100 milliseconds. Times in excess of this amount require evaluation.

Contrary to the above, on September 20, 1984, while performing ONOP 0208.1 following a Unit 4 trip, the licensee failed to identify that the time interval between relay dropout and reactor trip breaker 4B opening exceeded 100 milliseconds. Consequently, the required analysis of the significance of the information was not performed prior to returning the reactor to power operation.

RESPONSE:

1) FPL concurs with the violation.

2) The reason for the finding was personnel oversight in that the originator of the post trip review did not identify the excessive time delay between the relay dropout and reactor trip breaker opening.

   As it turns out, further investigations revealed that the excessive time delay was a result of DDPS response time to the transient and not an actual timing problem in the response of the reactor trip breakers to the initiating trip signal.

3) The failure to identify excessive time delay was discussed with the post trip review originator and the reviewing supervisor to ensure their understanding of the event and the importance of identifying proper reactor trip breaker response. The importance of identifying the proper reactor trip breaker response was re-emphasized to all operations personnel.

4) In order to assist the originator of the post trip review in identifying proper reactor trip breaker response, Appendix A, "Post Trip Review", to ONOP 0208.1 will be revised to require the subtraction of the relay dropout time from the reactor trip breaker opening time.

5) Full compliance will be achieved by December 1, 1984.

FINDING 2:

Technical Specification 6.8.1 requires that written procedures and administrative policies shall be established, implemented, and maintained, that meet or exceed the requirements and recommendations of Section 5.1 and 5.3 of ANSI N18.72 and Appendix A of USNRC Regulatory Guide 1.33.

ANSI N18.72 requires that adequate startup procedures shall be provided that include starting the reactor from cold or hot shutdown conditions and establishing power operation.

Section 2 of Appendix A of USNRC Regulatory Guide 1.33 recommends that instructions for changing modes of operation should be established covering the transition from hot standby to minimum load during nuclear startup.

Contrary to the above, as of August 23, 1984, adequate startup procedures had not been established in that:

FINDING 2.a:

Operating Procedure (OP) 1009.1, "Estimated Critical Conditions", could not be used to accurately estimate the point of reactor criticality except under extremely limited circumstances.

RESPONSE:

1) FPL concurs with the finding.

2) The reason for the finding was inadequate guidance in that procedure OP 1009.1 did not contain:

   a) proper guidance to be followed in off-normal conditions.

   b) review or acceptance criteria for ECC calculations.

3) OP 1009.1 has been reviewed against other utilities' procedures and Westinghouse generic literature. The following changes have been made to the procedure:

   a) Step 8.2 of the procedure now provides the guidance necessary to complete the ECC for reactor shutdowns from any power level. In addition, pre-printed entries on the worksheet have been deleted.

   b) The assumption that the shutdown begins from 100% equilibrium xenon has been modified to reflect that the shutdown is to begin at the referenced critical conditions.

   c) Westinghouse was requested to generate burnup dependent Samarium curves for the current cycles on both units. These are currently being reviewed for impact on ECC calculations. The value to be used in the interim is that value in the Plant Curve Book. The value in the procedure has been removed. All sources of poison worths are now the same.

d) The assumption of a 100% power defect has been modified to specify that the power defect (in pcm) is to be obtained from figure 2 of the Plant Curve Book (PCB) at the reactor power associated with the reference critical conditions.

e) The assumption of a constant differential boron worth has been modified to require it to be evaluated as a function of boron concentration from figure 8 of the PCB.

f) A software routine has been developed for DDPS to print up a report of poisons at the time of Reactor Trip. In addition, poison values will be saved in real time such that they will not be lost in the event of a computer trip. Additionally, OP 1009.1 directs the operator to request Reactor Engineering to simulate a power history to generate poison values if the values on DDPS are suspect.

g) Step 6.5 of the ECC worksheet now requires that the boron concentration be verified after boration or dilution as required by the ECC.

h) Step 4.3 of the procedure now states that the ECC calculation is valid with ± 1 hour of the time entered in step 3.2 of the ECC worksheet.

i) The vast majority of curves in the Plant Curve Book are Burnup dependent and are presented in that manner, primarily as a function of boron concentration. As discussed in Item 3c above, the Burnup dependence of poisons is under scrutiny. In addition, consideration of updating the rod worth curve as a function of burnup is under way.

4) Training will be given to operations personnel and STAs covering proper implementation of procedure changes described in (3) above.

5) a) Full compliance will be achieved by December 5, 1984, for operator training as described in (4) above.

b) Full compliance will be achieved by January 15, 1985 for STA training as described in (4) above.

c) Full compliance with burnup dependent values for the current cycles will be achieved as discussed in Item 3c above by March 1, 1985.

d) The software routine for DDPS poison report as discussed above in 3f will be incorporated by March 1, 1985. The completion of this action is dependent on current modifications to DDPS. Should this action require a new completion date, we will notify you accordingly.

e) The rod worth curves as a function of burnup will be updated by March 1, 1985 as discussed in Item 3i above.

FINDING 2.b.:

The inverse count rate data and plot sheet attached to OP-0202.2 "Unit Startup-Hot Shutdown to Power Operation", lacked specified precautions and implementation instructions, the absence of which precluded its use to accurately monitor the approach to reactor criticality.

RESPONSE:

1) FPL concurs with the finding.

2) The reason for the finding was inadequate guidance in that OP 0202.2 did not contain specified precautions and implementation instructions.

3) OP 0202.2 has been reviewed and revised to include the following changes:

   a) Guidance and acceptance criteria have been provided to be used when comparing the inverse count rate (1/M) plot critical rod height prediction with that predicted by the ECC calculation.

   b) The inverse count rate data and plot sheet have been revised to allow at least one minute to elapse after the count rate doubles prior to recording the actual count rate and rod height. Also the plot sheet has been revised to facilitate its use.

   c) OP 1009.1, "Estimated Critical Conditions (ECC)", has been revised as described in the response to finding 2.a in this report. These procedures will be used in conjunction during reactor startups to accurately monitor the approach to reactor criticality.

4) a) Training will be given to operations personnel and STAs covering proper implementation of procedure changes described in (3) above.

   b) The following actions will be taken in order to provide additional guidance to operators when conducting reactor startups.

      1) OP 0202.2 will be revised to describe required operator actions when the 1/M plot indicates that the reactor will not go critical with control rod bank D fully withdrawn.

      2) OP 0202.2 will be revised to describe required operator action when the 1/M plot predicts that criticality will occur below the rod insertion limit.

5) a) Full compliance will be achieved by December 14, 1984, for operator training as described in 4(a) above.

   b) Full compliance will be achieved by January 15, 1985 for STA training as described in 4(a) above.

   c) Full compliance for item 4(b) above will be achieved by December 15, 1984.

FINDING 3:

The facility operating license requires the licensee to originate and maintain facility operating records in accordance with the requirements of the Technical Specifications.

Technical Specification 6.10.1 requires records and logs of facility operation to be retained for at least five years.

Contrary to the above, prior to August 1984, the licensee did not retain graphs and charts from the Plant Curve Book which constitute records of facility operating parameters.

RESPONSE:

1) FPL concurs with the finding.

2) The reason for the finding was that the retention of an archival copy of graphs and charts from the Plant Curve Book was not identified as falling under Quality Assurance (QA) record retention requirements.

3) All changes to the Plant Curve Book will be reviewed by the Plant Nuclear Safety Committee and copies will be retained in accordance with QA record retention requirements.

4) a) A new procedure is being developed to ensure compliance with QA record retention requirements.

   b) The QA Department is conducting a comprehensive review of records to determine record retention requirements as part of our Program for Improved Operations as described in our letter L-84-265, dated September 28, 1984.

5) Full compliance will be achieved by December 14, 1984.