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September 16, 1986

Docket No. 50-302
License No. DPR-72

Florida Power Corporation
✓ATTN: Mr. W. S. Wilgus
Vice President Nuclear Operations
P. O. Box 14042, M.A.C. C-2-M
St. Petersburg, FL 33733

Gentlemen:

SUBJECT: NRC INSPECTION REPORT NO. 50-302/86-04

Thank you for your responses of May 16, and July 31, 1986, to our Notice of Violation issued on April 16, 1986, concerning activities conducted at your Crystal River facility.

We have evaluated your response to the violation and concluded, for the reasons presented in the enclosure to this letter, that the examples of the violation occurred as stated in the Notice of Violation. As discussed during our meeting in Atlanta on September 10, 1986, we are concerned that your July 31, 1986, response to our report indicates that you do not expect or require verbatim compliance with abnormal operating procedures. We understand that you will provide an additional supplemental response to this report which will provide assurance that you do expect verbatim compliance. We will confirm your commitment to procedural compliance during future inspections.

Thank you for your cooperation in this matter.

Sincerely,

ORIGINAL SIGNED BY:
J. NELSON GRACE

J. Nelson Grace
Regional Administrator

Enclosure:
Staff Assessment

cc w/encl:
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Operations
✓ R. C. Widell, Manager Nuclear
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ENCLOSURE

STAFF ASSESSMENT OF LICENSEE RESPONSE

On April 16, 1986, a Notice of Violation (NOV) was issued for a violation of an NRC requirement. Florida Power Corporation's responses to the NOV were provided in letters dated May 16 and July 31, 1986. A restatement of the violation, a summary of the licensee's response, the NRC staff's evaluation of the licensee's response, and its conclusions are set forth.

Restatement of the Violation

Technical Specification 6.8.1 states that written procedures shall be established, implemented and maintained covering the applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, November 1972.

Appendix "A" of Regulatory Guide 1.33, November 1972 recommended procedures for combating emergencies and other significant events including reactor trip.

Contrary to the above, three examples were noted where the licensee failed to properly implement required procedures in the performance of Abnormal Procedure AP-580 Reactor Protection System Actuation, following the reactor trip on January 1, 1986, specifically:

- a. The operators failed to depress the reactor trip push button as specified by Immediate Action 1 of AP-580.
- b. The operators performed only Remedial Action 3, open MUV-24, of the four actions specified by Immediate Action 6 of AP-580.
- c. The operators did not open the suction from the Borated Water Storage Tank to the running makeup pump(s) as specified by the Detailed Action to be performed under Followup Action 2 of AP-580 when Make-up Tank level is less than or equal to 55 inches.

This is a Severity Level IV violation (Supplement I).

Summary of the Licensee's Response

- a. Florida Power Corporation (FPC) agrees with this example of the stated violation in that the operators failed to depress the reactor trip push button as specified by Immediate Action 1 of AP-580.
- b. FPC agrees the operators performed only Remedial Action 3 of the four actions specified by Immediate Action 6 of AP-580. However, FPC does not consider this to be an example of a violation since the actions taken were consistent with Florida Power Corporation philosophy, training, and the Plant Operating Quality Assurance Manual. The abnormal procedures are

guidance procedures written to address a wide variation in levels of severity. The procedures are written to assure the plant will be stabilized in a worst case event. Operators have been trained to use judgement when taking remedial actions based on the status of the plant. All remedial actions may not be required for each event. The operators took appropriate action for this event by opening MUV-24. The operator was aware that since the pressurizer level was decreasing slowly and the event was proceeding as expected, no drastic action was needed.

- c. FPC agrees that the operators did not open the suction from the Borated Water Storage Tank to the running make-up pump(s) as described in Follow-up Action 3 of AP-580. FPC disagrees that this is an example of a violation since the actions taken were consistent with Florida Power Corporation philosophy, operator training, and the Plant Operating Quality Assurance Manual. Follow-up actions are performed after immediate and remedial actions are complete. The Follow-up actions are guidance provided to maintain plant stability once it is achieved. The desired results are for the operators to maintain the stability of the plant and to assure critical parameters are satisfied for proceeding to the next major activity. Since the Abnormal Procedures cover a range of circumstances, the procedures give details for the action steps that will achieve the particular result for that step. The method detailed may not be the best response considering the plant status at any given time. The operators are trained to understand this, and they are trained to use judgement to assure that for the given conditions, the most appropriate action is taken. In this case, the use of the Reactor Coolant Bleed Tank (RCBT) to raise the Make-up Tank level per the normal approved operating procedure was the most appropriate action since this is the preferred normal method and the operator had the time to assure the RCBT parameters were proper.

NRC Evaluation of the Licensee Response

- a. With regard to example a. of the violation, the apparent cause of the failure to depress the reactor trip pushbutton was attributed to "an oversight by the operator." We consider this to be an extremely cavalier attitude on the part of FPC. Although the action may be redundant considering the other parameters that indicated a reactor trip, it is still an effective means of verifying that the automatic trip signal has resulted in the control rod drive motors being deenergized. FPC has chosen to require this action as an immediate action substep to ensuring that Group 1 through 7 control rods have inserted following a reactor trip signal. American National Standard Institute (ANSI) N18.7-1976 defines immediate operator actions as steps that specify "... immediate actions that are required to stop the degradation of conditions and mitigate their consequences." This standard further gives an example of an immediate action as "assurance that reactor is in a safe condition. This step usually means shutdown of the reactor with sufficient reactivity margin and establishment of required core cooling."

The significance of immediate action steps of abnormal and emergency procedures and the importance of performing these steps as required by the procedures should be immediately and continually emphasized to all licensed personnel. The FPC action to prevent recurrence, i.e., annual training on the requirement to perform all immediate actions, is considered inadequate.

- b. With regard to example b. of the violation, if only remedial action 3 of the 4 actions was required to correct the pressurizer low level condition, then the procedure was not written in accordance with the FPC "Writer's Guide for Abnormal, Verification and Emergency Procedures." The Writer's Guide, item 3.4.2 states that consecutive numbers are used to designate instruction steps. Also, item 3.4.3 states that all steps are to be arranged in the order in which they are to be performed. Thus, the remedial action instructs the operator to perform four actions in the following order: 1) Open suction from Borated Water Storage Tank (BWST), 2) Start second Makeup pump (MUP), 3) Open Makeup Valve (MUV)-24, and 4) Close MUV-51. If opening MUV-24 is appropriate for most circumstances but not always effective thus requiring one or all of the other three actions, then it should have been written as a logic statement. For example,

Open MUV-24

IF PZR [pressurizer] level does not recover to ≥ 50 "

THEN

1. Open suction from BWST
2. Start 2nd MUP
3. Close MUV-51

The failure to implement appropriate procedures constitutes a violation of 10 CFR 50, Appendix B, Criterion V and Technical Specifications 6.8.1. It would also constitute a deviation from the licensee's commitment to write procedures in accordance with the Procedures Generation Package that was submitted to the NRC for review and approval.

- c. With regard to example c., NUREG-0899, "Guidelines for the Preparation of Emergency Operating Procedures," defines subsequent operator actions as "the action steps that the operators use to return the plant to a normal stable, or a safe steady state condition or to provide for a safe extended shutdown period under abnormal or emergency conditions" Subsequent actions are identical to FPC's "follow-up" steps which are divided into ACTION steps and DETAIL steps by FPC's Writer's Guide. DETAIL steps present more detailed operational information for the corresponding ACTION step which is defined as a functional statement that provides adequate guidance to experienced operators under low stress conditions. Regulatory guidance (e.g., NUREG-1021 and ANSI N18.7-1976) is that follow-up steps need not be committed to memory and in fact should be performed with the procedure in hand. Since the Crystal River operators presumably were reading the follow-up steps of AP-580, they failed to properly implement the approved procedural step or

the procedure was in error. If the correct action was for the operator to choose from several different courses of action, then according to the FPC Writer's Guide an appropriate statement may be:

IF MUT [Makeup Tank] ≤ 55 "

THEN either;

refer to OP-XXXX to raise the Make-up Tank level from the Reactor Coolant Bleed Tank

OR

open suction from BWST to running MUP(s)

This is a logic step in which the preferred course of action (as stated in your response of July 31, 1986) is listed first. If any one of several equally preferable steps is acceptable, it should be written in accordance with item 5.3.4 of your Writer's Guide. If AP-580 was written according to your Writer's Guide then the operators had no alternative course of actions and, therefore, failed to follow procedures.

Conclusion

The three examples of the failure to follow the appropriate steps of AP-580 are of minor safety significance in that the desired safe condition of the plant was restored. With respect to examples b. and c., the NRC is concerned with FPC's apparent attitude that abnormal procedures, including emergency procedures, need not be followed when in the judgement of the operators they are allowed to exercise discretion based on their training and experience. This negates the effort of the industry and the NRC over the last seven years in the development and validation of symptom-based emergency procedures. The NRC must presume that Crystal River management is promoting this attitude by their licensed personnel or has failed in their efforts to write these procedures in accordance with their approved Procedures Generation Package.