FLORIDA
POWER
CORPORATION
Crystal River Unit 3
Docket No. 50-302

May 5, 1995
3F0595-13

Mr. Stewart Ebneter
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W., Suite 2900
Atlanta, Georgia 30323

Reference: A. NRC to FPC letter, 3N1194-02, dated November 4, 1994
B. FPC to NRC letter, 3F1294-09, dated December 2, 1994

Subject: Unresolved Item 94-22-01, Makeup Tank Operation

Dear Mr. Ebneter:

This letter supplements our letter of December 2, 1994 (Reference B) by providing additional information from our continuing review of unresolved item 94-22-01, makeup tank (MUT) operation. This additional information includes FPC's corrective actions to resolve the issue and further disciplinary action taken against the responsible Shift Supervisor and Assistant Shift Supervisor.

As you know, this matter has been the subject of an investigation by the NRC's Office of Investigations (OI). The focus of that investigation, as we understand it, is whether the actions of an FPC operating shift at Crystal River Unit 3, in conducting an unauthorized evolution on the MUT on September 5, 1994, constituted a willful violation of procedural requirements. FPC takes any NRC concern in this regard very seriously. We have therefore reviewed the events of September 5, 1994, from the perspective of whether a willful violation occurred.

As explained in more detail below, FPC in no way condones the actions of the Shift Supervisor and Assistant Shift Supervisor. FPC has taken appropriate disciplinary action with regard to the responsible individuals, which we believe to be adequate in light of all the circumstances, including their overall performance records. Based upon our review, however, we do not believe that the individuals' actions rose to the level of deliberate misconduct. They were motivated by a desire to obtain data to support a legitimate technical concern with the validity of the MUT operating curve. Moreover, they did not understand at the time that the curve reflected design basis limits.

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Under these circumstances, FPC does not believe that any purpose would be served by NRC enforcement action against the individuals. We are also concerned with the message that such an action might send. FPC management has worked hard to instill a questioning attitude among the workforce at Crystal River. Further action against the personnel involved could have the unintended effect of discouraging others from pursuing legitimate concerns.

Additional Corrective Actions

In addition to the steps described in our December 2, 1994 letter, FPC has taken the following corrective actions:

1. The Shift Supervisor and the Assistant Shift Supervisor were removed from licensed duties and reassigned within the Operations Department. Their current duties involve procedures development and other operational support areas where their SRO experience is helpful. FPC has no intent to place the individuals back on shift at this time. FPC will consult with the NRC before returning either individual to shift duties.

2. FPC has established a detailed follow-on action plan to resolve, in a comprehensive fashion, the complex technical issues associated with makeup tank operation and the borated water storage tank/reactor building sump level. The action plan includes further validation of OP-103B, Curve 8, to ensure the correct operating region and alarm values.

If any FPC licensed personnel had willfully violated operating procedures, FPC would not hesitate to take even stronger action, including discharge of the persons responsible. Our further review of this matter has confirmed our conviction that although the Shift's actions in conducting an unauthorized evolution were unacceptable and warranted strong discipline, the individuals did not engage in deliberate misconduct.

Conclusions Regarding Deliberate Misconduct

The facts surrounding the unauthorized evolution on the MUT are summarized in our December 2, 1994, letter and the NRC's Inspection Report (Reference A). We provide here a summary of the factors that reflect the state of mind of the individuals involved. If the NRC is aware of any evidence of wrongful intent, please notify FPC so that we can take appropriate action.

- In brief, on May 10, 1994, during the refueling outage at CR-3, the Shift Supervisor and Assistant Shift Supervisor were in charge of the operating crew that performed Surveillance Procedure (SP)-630, a full flow test for the High Pressure Injection pumps and check valves. While performing SP-630, the operators observed a noticeable decrease in the MUT level, indicating a possible stuck-open makeup valve, along with cavitation of MUP-1C. This condition was documented in Problem Report (PR) 94-0149, dated May 10, 1994. PR 94-0149 noted that, based on comparisons by Operations personnel of the actual drop in MUT level with the maximum MUT overpressure curve in OP-103B (Curve 8), a curve plotted with the actual data points trended toward the unacceptable region of Curve 8. PR 94-0149 further noted that this occurred even though the initial MUT over-pressure level during SP-630 was below the maximum allowable pressure per Curve 8.

- The corrective actions for PR 94-0149 included evaluating the MUT level drop that occurred to determine whether Curve 8 was acceptable. The evaluation performed by System Engineering [Nuclear Plant Technical Support] concluded as follows:

  The decreasing change between the plotted curve and OP-103B, Curve 8 appears to be mainly due to the fact that both curves are converging on zero psig. Based on this evaluation, it does not appear the plotted curve would have enterer [sic] the unacceptable region of Curve 8. In addition, *there is conservatism built into Curve 8* to ensure that instrument error, for example, could not create an excessive overpressure condition. [emphasis added]

- These conclusions were also documented in a memorandum from Nuclear Plant Technical Support, dated September 2, 1994. A copy of the memorandum was provided to the Shift Supervisor and Assistant Shift Supervisor, for the purpose of determining whether they had any additional concerns or questions before the issue was closed.

- The Shift Supervisor and Assistant Shift Supervisor have indicated that they did not have enough information to know whether they still should be concerned with the MUT overpressure/level curve. Accordingly, on September 5, 1994, they conducted the evolution (described in FPC's letter of December 2, 1994) to gather additional data by measuring the system response as MUT level was lowered. In carrying out this evolution, the Shift Supervisor and Assistant Shift Supervisor have indicated that they followed the operating procedure for the MU system (OP-402) and initially placed the system on the operating curve limit (i.e., not in violation of the curve). They expressly decided not to take the MUT level below the clearly stated low level limit of 55 inches. As the MUT level was reduced, they took data on the system response. Soon after the evolution began, the overpressure drifted into the unacceptable operating region with respect to MUT level. The crew failed to terminate the evolution at that point or otherwise take appropriate action. The evolution did, however, lead to engineering confirming that the operating curve was inaccurate and nonconservative. The shift reported this discrepancy to their management and initiated a Problem Report (PR 94-0267).

The NRC's Enforcement Policy, 10 C.F.R. Part 2, Appendix C, Section VIII, states that enforcement actions involving individuals are "significant personnel actions which will be closely controlled and judiciously applied." According to Section VIII of the Enforcement Policy, enforcement actions against an individual are reserved for "[m]ore serious violations, including those involving the integrity of an individual (e.g., lying to the NRC).

Application of this policy is reflected in the following cases involving unauthorized actions by operators, where the NRC has imposed individual enforcement sanctions: See David Tang Wee, IA 94-06 (1994) (NRC prohibited SRO from engaging in licensed activities for three years following deliberate

cover up of mispositioned control rod incident); Robert L. Dickherber, EA 90-31 (1990) and Commonwealth Edison Co. (Quad Cities Nuclear Power Station, Unit 1), EA 90-32 (1990) (NRC issued orders suspending license of fuel handling SRO and modifying the license for Quad Cities where the individualengaged in manipulations to make up for an error in the placement of a fuel assembly); see also GPU Nuclear Corp. (Oyster Creek Nuclear Generating Station), EA 87-185 (1989) and Alfred E. Geaudreau, Jr., EA 88-224 (1989) (NRC issued violations to both licensee and control room operator for operator's deliberate destruction of alarm tape documenting safety limit violation); PECO Energy (Peach Bottom Atomic Power Station), EA 93-290 (1994) (NRC cautioned licensee that future deliberate violations of procedures governing entry into high radiation areas would result in enforcement action against both licensee and individuals involved).

However, in cases not involving deliberate intent to violate regulations or procedures, the NRC has found forceful disciplinary action by the licensee to be sufficient, and has not pursued enforcement action against the individuals involved. See Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), EA 83-34 (1983) (licensee removed from licensed duties the senior control room operator and shift supervisor on duty when a technician caused violation of LCO requiring secondary containment integrity during movement of irradiated fuel in spent fuel pool); Carolina Power & Light Co. (H.B. Robinson Plant); EA 84-13 (1984) (licensee suspended without pay a licensed operator and shift foreman who failed to follow procedures for work in high radiation area).

Extenuating Factors

Although the Shift's actions in conducting the evolution without proper authority were clearly inappropriate, two extenuating factors should be noted. First, the evolution was conducted for the purpose of gathering data to determine whether a technical concern with Curve 8 existed. This was not a case of a failure to follow procedures motivated by improper or wrongful intent. Second, the Shift Supervisor and Assistant Shift Supervisor did not realize that the operating curve was a design basis limit. They believed that the curve effectively established administrative limits, as had been indicated in the September 2, 1994, memorandum in which Engineering had concluded that Curve 8 was "accurate and reasonably conservative." In fact, only after further design basis evaluation did FPC conclude that operation in the unacceptable region of the curve constituted operation outside the design basis of the system (see Attachment 6 of our December 2, 1994 letter).

This was also not a case where an operator knowingly failed to follow an explicit procedural step or other requirement, or disregarded the advice of other control room personnel that his action was inconsistent with procedures. The Shift Supervisor and Assistant Shift Supervisor referred to OP-402 and maintained the MUT level within the normal operating limits of 55 to 86 inches. In addition, they have also indicated that they were not sure that Curve 8 (of OP-103B) applied during this evolution since it is only referenced in the portion of OP-402 governing venting and hydrogen addition (section 4.20). These factors do not excuse the operators' failure to act in a timely manner once the system response drifted into the unacceptable range of Curve 8. However, this case should be distinguished from one where operators took affirmative action that violated an explicit procedural requirement.

Summary

We reiterate that FPC in no way condones the actions of the shift in conducting an unauthorized evolution on the MUT. Such an action is incompatible with good operating principles and management's expectations. Nevertheless, FPC remains concerned with the negative impact of further NRC enforcement sanctions against the individual Shift Supervisor and Assistant Shift Supervisor in the absence of deliberate misconduct and in view of FPC prior disciplinary actions . Based upon the facts of this case, therefore, FPC does not believe enforcement action against the individual operators is warranted (e.g., for a violation of the NRC's deliberate misconduct rule in 10 C.F.R. § 50.5).

Sincerely,

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Nuclear Operations

PMB:ff

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