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Vice President
Nuclear Operations

August 14, 1989
3F0889-06

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
Management Review of Significant Current Issues

Dear Sir:

Florida Power Corporation (FPC) had scheduled to meet with senior members of the NRC staff on August 10, 1989 to discuss various issues principally associated with electrical systems at Crystal River Unit 3 (CR-3). For several reasons it was determined to be mutually beneficial to move the formal meeting to August 31. I previously met with several key staff members to update them on our status on these issues. The staff appeared to be quite receptive to our proposed actions. This letter is provided to allow wider distribution of that information and to briefly highlight other subjects that will be discussed later this month. FPC has submitted, under separate cover, responses to two sets of staff requests for additional information on various details of the recent startup transformer power interruptions and the diesel generator upgrade program. Attachment 1 also outlines our proposals to resolve items identified by the recent station blackout review. Attachment 2 provides a brief status and plan for other non-electrical issues of interest.

FPC Management has aggressively pursued these issues and is confident that as the staff is provided additional information they will support our technical positions as well as the schedule for needed improvements. FPC recognizes that the sufficiency of our standby AC and DC power sources are of concern based both on generic insights (e.g., the station blackout initiatives) and plant specific insights gained from our PRA. While not formally required to initiate an integrated plant evaluation program, FPC has utilized the information gained from our PRA to prioritize these activities.

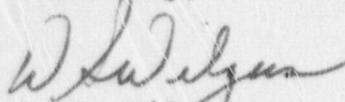
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The attached summaries should help provide a more complete understanding of the various issues. The needed regulatory interactions have been noted in the summaries.

Sincerely,



W. S. Wilgus
Vice President, Nuclear Operations

KRW:JDK
cc: Regional Administrator, Region II

ATTACHMENT 1
ELECTRICAL ISSUES UPDATES

DIESEL AND RELATED MODIFICATIONS

The Emergency Diesel Generator (EDG) upgrade program includes several activities, designed to increase reliability, increase capacity, reduce voltage dips and reduce projected emergency loading. The following improvements are currently scheduled for Refuel 7 (Spring 1990):

- (a) Replacement of several EDG components with more reliable, currently supplied equipment;
- (b) Expansion of lube oil cooling capacity;
- (c) Addition of diesel monitoring system to vastly expand the amount of performance data available for reliability centered maintenance activities;
- (d) Realigning block load sequences to better balance transient loading on the EDG's;
- (e) Testing to support EDG ratings upgrade to 3500 kW, (30 minutes), 3250 kW (200 hrs.) 3000 kW (2000 hr) and 2850 kW (continuous); and
- (f) Addition of the trip/block modification on DH/EFW pumps to lower projected worse case load and avoid unnecessary prolonged operation of DH pumps at low flow.

Items (a) and (e) require sufficient NRC concurrence to support requalification under 10 CFR 50.59. A detailed discussion is scheduled this month on this in response to your questions of July 21, 1989. Item (b) above will require a temporary exemption to GDC-2 (request filed separately) to allow missile shield relocation during pre-outage work on the project. Items (c) and (d) may not be accomplished in Refuel 7 due to material delivery or work interferences. We are still striving to meet Refuel 7 but we are less certain these items can be accomplished. Preliminary review of item (f) by the staff has just been completed. An additional review of final design, including resolution of NRC concerns on the conceptual design, remains to be completed.

STARTUP TRANSFORMERS

FPC reported the limited capability of the backup offsite AC power source (CR 1/2 Startup Transformer) earlier this year. Two events in June and a complex simultaneous startup of CR-2 and CR-3 heightened FPC's concern over the long-term suitability of the current arrangement. FPC is committed to the installation of a second dedicated offsite power source replacing the CR 1/2 transformer's support of CR-3 as soon as practicable. In support of this, a spare transformer is being installed just east of the existing 230 kV switchyard, and control and power circuitry will be added during Refuel 7 if possible. This is a very ambitious schedule but one supported by FPC senior management. FPC is

reviewing other changes (automatic load tap changing, automatic transfer, retention of the CR 1/2 startup transformer feed as an additional backup, etc.) on a longer schedule associated with returning this transformer to its spare status and providing an upgraded transformer for this particular purpose. No NRC actions are currently required to support short term changes.

BATTERIES

The CR-3 batteries are relatively near the end of their design life and have been a growing maintenance challenge. Further, their size is acceptable but provides little margin. FPC will replace the existing battery banks with slightly larger ones before restart from Refuel 7. FPC is also evaluating interim and long term modifications to better balance the loads or provide additional backup DC capability. This will reduce the operating staff's burden in Station Blackout sequences, provide additional margin, etc. FPC does plan to propose more current Technical Specifications surveillance requirements as soon as the margins provided will support such changes.

STATION BLACKOUT

FPC has been an active participant in efforts to resolve this generic safety concern. Further, since Station Blackout (SBO) sequences are dominant in the CR-3 PRA, we have aggressively followed up on identified weaknesses. Many of the items outlined in the preceding summaries give testimony to that commitment. Some concerns warranting further discussion were raised by the recent SBO review at CR-3.

The first focused on our Reactor Coolant System (RCS) inventory calculation. It was not consistent with NUMARC or NRC assumptions (25 gpm leak per Reactor Coolant Pump [RCP]). This inconsistency was not clearly identified and dispositioned. We will rectify the record but are confident the assumed leakage rate (30 gpm total) remains valid for CR-3. Byron Jackson (B-J) has designed a new RCP seal which will be installed at CR-3 during Refuel 7. The B-J seal task force met with the staff to review our SBO testing of the new seals which was very successful (practically no leakage during or post-SBO). The SBO team required NRC approval of the test program which was not sought. Therefore, FPC will either gain such approval, perform modified plant specific calculations, or await generic BWO calculations currently underway. Either of these paths should reconfirm our coping strategy that does not require RCS makeup.

The second issue is similar in that FPC is not following the literal semantics of the NUMARC or NRC position on severe weather procedures and yet takes credit for their adequacy in our coping duration. FPC and NRC have already outlined two strategies both of which will support our existing duration. They are: selection

of higher target EDG reliability (which FPC is reluctant to do until the resolution of Generic Safety Issue B-56 is finalized); or providing closer demonstrated equivalency to the NUMARC guidelines intent for NRC concurrence.

The third issue was the ability to manually control Atmospheric Dump Valves (ADV) under SBO conditions (temperature, lighting, etc.). FPC's position is that adequate ADV control is plausible. However, our own discomfort with the difficulties associated with manual control lead us to commit to study how to improve this situation as a SBO required modification. We contemplated a less conservative calculation producing more habitable temperatures, remote manual control, etc. We scheduled this design study for 1990-91 to support Refuel 8 (1992) installation. The team considered the level of detail provided to be unresponsive to the rule's requirement to "describe" modifications required. In hindsight we agree but do not believe our schedule or plans to be at all inappropriate.

The team expressed concern that the level of detail existing in our operating procedure outline was insufficient. FPC relied on close teamwork between engineering, licensing, and operations to assure the engineering activities supported operational needs, not a written outline. This makes independent review more difficult but is actually more effective.

Finally the team is now expressing concern with the concept of utilizing our Remote Shutdown Panel in mitigating SBO events. FPC acknowledges that the NRC is somewhat concerned about using this as a means of conserving DC capacity but is unaware of any guidance which would prevent such action. Further, as noted earlier, FPC is already contemplating increased DC capability on a schedule consistent with SBO implementation.

FPC will provide the SBO review team schedules for requested calculation packages, etc. and will try to minimize adverse impact on the SER schedule. We also share the goal of minimizing open items where possible.

ATTACHMENT 2
OTHER SIGNIFICANT ISSUES

ENVIRONMENTAL QUALIFICATION

As a result of an ongoing generic evolution in the Environmental Qualification (EQ) arena, FPC contracted for an independent review of our EQ program. We discussed it briefly at the June 28, 1989, enforcement conference and in our July 20, 1989 follow-up report. We committed to provide a schedule for EQ activities as soon as milestones could be finalized. FPC will discuss the scope and schedule for the E.Q. Program during our meeting scheduled for August 31, 1989. The key scheduled milestones for two of the program phases are as follows:

1. Field Walkdowns

- Pilot Completed August, 1989
- Outside RB Beginning September, 1989
- Inside RB Refuel 7 - March, 1990
- Complete (Including Documentation) August, 1990

2. EQ Master List Reverification

- Shutdown Logic Diagrams Began July, 1989
- Complete List Verified March, 1990

HIGH ENERGY LINE BREAK

NRC granted FPC a temporary exemption to GDC-4 with regard to HELB through Refuel 7. FPC has expressed a commitment to meet such a schedule if possible or to show sufficient progress to warrant further relief. FPC continues to expect that further relief may be required. However, our work to date has shown some opportunity for improvement in our original schedules. Our current schedule/status is as follows:

Phase I (10 breaks)

- Design Complete
- Construction Through Refuel 7 (final shimming)

Phase II (balance)

- Design Initiation Complete
- Design Complete October 1989
- Construction To Be Determined based upon final design and material availability

DECAY HEAT/LOW PRESSURE INJECTION PUMPS

Crystal River Unit 3's Decay Heat Pump (DHP) minimum flow recommendations received from the manufacturer as a result of Bulletin 88-04, "Potential Safety Related Pump Loss," were higher than actual operating history indicated. Discussions with the manufacturer and engineering evaluations were conducted which provided sufficient justification to permit continued plant operations.

FPC's handling of this issue, however, has been somewhat inconsistent. Our reporting, timeliness and scope of response were quite appropriate. Our communication of the resolution became unclear. FPC is scheduled to meet with the staff on August 17, 1989 to determine the best course of action from this point forward. It may involve analysis or longer test durations if the existing data is judged insufficient by the staff.