

**Florida
Power**
CORPORATION

June 12, 1990
3F0690-06

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
Reactor Building Flood
Supplement 2

Dear Sir:

Florida Power Corporation's (FPC) letter dated June 4, 1990 regarding the Reactor Building (RB) flooding issue discussed how the Control Room habitability dose would be adversely affected by the limitation of RB flood volume unless overly conservative failure postulations were not also changed. Accordingly, FPC chose not to postulate a gross failure of a passive component which causes a 50 gpm leak for 30 minutes at 24 hours after the accident. (FPC considered this appropriate since CR-3 has a filter system in the areas containing Engineered Safety Features systems). Elimination of this postulated failure produces a 30-day control room thyroid dose of 22.5 rem without any credit for iodine removal by the filter system. This is below the SRP 6.4 recommended limit of 30 rem thyroid.

Discussions with members of the NRC staff have been held regarding these changes in the control room dose calculation assumptions. The NRC staff requested that a dose calculation be made which includes partial credit for the filter system while postulating this passive failure. This calculation was performed and used the following assumptions:

1. Operational leakage of 510 cc/hr,
2. 50 gpm leak for 30 minutes at 24 hours after the accident, and

9006200070 900612
PDR ADOCK 05000302
P PNU

ADD
11

3. Auxiliary Building Ventilation System in service with 75% efficient charcoal filters for iodine.

The resulting 30 day thyroid dose using these assumptions is 25.6 rem. This dose is also below the SRP 6.4 recommended limit. Assumptions 1 and 2 follow SRP 15.6.5 Appendix B guidelines. Assumption 3 is considered a reasonable value for the filter system since it is not fully safety grade. Regulatory Guide 1.52, Revision 2 allows a 95% filter efficiency assumption for a charcoal filter with a 2 inch bed depth designed to operate outside the reactor building. The CR-3 System is tested in accordance with appropriate portions of Regulatory Guide 1.52 as required by the associated Technical Specification (4.7.8.1).

FPC is continuing to evaluate long term solutions to this particular aspect of the RB flooding issue. Options currently include upgrades to the filter system; relocation of critical equipment to allow a return to previous initial conditions for the dose analysis; and other refinements to the dose analysis such as the source term.

FPC has also had several discussions with your staff on the overall RB flooding issue over the last few weeks. The principal NRC concern appears to focus on the decreased operator response time. FPC strongly agrees that operator burden must always be appropriately considered in establishing or modifying accident mitigation strategies that rely solely or principally on operator action. FPC considers our modified strategy to be satisfactory since even under large break LOCA conditions the operator will not be called upon for at least 10 minutes; well after the immediate EOP steps have been completed. This is consistent with standard analytical assumptions for simple, nondiagnostic actions. In addition, the operator has more than 10 minutes to complete the swapover before reaching a flood level that would cover some instruments. Actual swapover actions took approximately 5 to 7 minutes during simulator runs. All these action times assume full large break LOCA injection and spray flow rates. More likely break sizes allow substantially longer time frames before operator action is required and for the operator to perform the swapover. Thus, the period of time until operator action must be taken under this new strategy is comparable to the approximate 30 minutes under previous mitigation strategies.

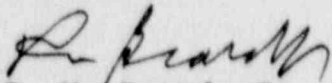
An additional NRC concern was noted regarding the increased significance of the reliability of RB Flood Level Instrumentation. Both BWST and RB Flood Level variables are monitored by Regulatory Guide 1.97 Category 1 instrument strings. The RB Flood Level will be changed to a Type A variable instead of Type B. Current CR-3

June 12, 1990
3F0690-06
Page 3

Technical Specifications already establish controls for this and other Type A variables consistent with current staff positions. EOP action setpoints for such variables are not included in Technical Specifications. FPC considers the reliability and control of the instrumentation to be appropriate.

Actions necessary to permanently resolve the RB Flood and related issues (SBLOCA pH and LBLOCA dose) will be evaluated over the next several weeks. We will supplement this interim corrective action with our plan and schedule by October 1, 1990. We will also provide quarterly updates on our efforts to resolve these issues. Permanent resolution is tentatively scheduled for Refuel 8, but must be coordinated with material delivery and other NRC commitment priorities through our master schedule process. NRC approval will be sought for any schedule changes.

Sincerely,



P. M. Beard, Jr.
Senior Vice President
Nuclear Operations

PMB:KRW:JWT

xc: Regional Administrator, Region II
Senior Resident Inspector