50-302

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 20, 1996

Mr. Percy M. Beard, Jr.
Senior Vice President, Nuclear Operations
Florida Power Corporation
ATTN: Manager, Nuclear Licensing (SA2A)
Crystal River Energy Complex
15760 W Power Line Street
Crystal River, Florida 34428-6708

SUBJECT: CRYSTAL RIVER NUCLEAR GENERATING PLANT UNIT 3 - FINAL SAFETY ANALYSIS REPORT REVISION 23

Dear Mr. Beard:

By letter dated November 18, 1996, you submitted Revision 23 to the Crystal River Unit 3 Final Safety Analysis Report (FSAR). The FSAR Revision 23 included changes to the facility that have been implemented as of the end of Refuel 10 which was completed in May 1996.

10 CFR 50.59, "Changes, Tests and Experiments," permits licensees to make changes in the facility or procedures as described in the FSAR without prior Commission approval, unless the proposed change involves an unreviewed safety question (USQ). A proposed change shall be deemed to involve an unreviewed safety question if the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the SAR may be increased, if a possibility for an accident or malfunction of a different type than any evaluated previously in the SAR may be created, or if the margin of safety as defined in the basis for any technical specification is reduced.

We understand from your November 18, 1996, submittal that you made the FSAR changes to reflect previously issued license amendments or other NRC approved changes. You also made other FSAR changes to reflect plant operational evolutions and to resolve design problems which have not been reviewed by the NRC. Our initial review of the FSAR revision indicates that some of these changes may involve an USQ. Enclosed are two of several examples of the FSAR changes which may involve an USQ.

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Within 15 days of receipt of this letter, please schedule a meeting with us to discuss the bases for your determination that the FSAR Revision 23 changes do not involve an USQ. We discussed this request today with your licensing staff who have agreed to the meeting. If you have any questions regarding this matter please contact me at (301) 415-1471 or write to me.

Sincerely,

ORIGINAL SIGNED BY:

L. Raghavan, Project Manager
Project Directorate II-3
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Docket No. 50-302

Enclosure: As stated

cc w/enclosure: See next page

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Mr. Percy M. Beard, Jr.
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CRYSTAL RIVER UNIT NO. 3
GENERATING PLANT

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CRYSTAL RIVER NUCLEAR GENERATING PLANT UNIT 3

FINAL SAFETY ANALYSIS REPORT, REVISION 23

TWO EXAMPLES OF FSAR CHANGES WHICH MAY INVOLVE USQs

1. RCS Cold Leg Small Break LOCA

Prior revision 23, FSAR Section 6.1.3.1.1, stated that:

> "To mitigate an accident resulting from a small break at the RCP discharge which initiates the HPI System but not the LPI [low pressure injection] System, HPI [high pressure injection] flow to the reactor must be the equivalent of 70% of the flow of one HPI pump. The following injection line/pump configurations will result in at least the required flow:
>
> a. 4 lines with 2 HPI pumps.
> b. 4 lines with 1 HPI pump.
> c. 3 lines with 2 HPI pumps.
> d. 2 lines with 2 HPI pumps.
>
> The dual power source provision (see Section 6.1.2.1.1) of the HPI valves assures that one of these configurations will be achievable in the event of the worst case single failure during a small break LOCA."

There were no operator actions credited to mitigate this event.

FSAR Revision 23 describes a new scenario and indicates that a loss of electrical power to one train of ES equipment would create the worst case scenario. In the first 10 minutes, one HPI pump would be injecting through two HPI injection lines. This HPI line/pump configuration is different from that described in the FSAR prior to Revision 23.

In addition, the revised HPI system configuration includes operator action.

a) 1st 10 minutes: One HPI pump injecting through two HPI injection lines.

Inherent flow differences in the HPI injection lines combined with no automatic isolation of the normal makeup flow and the RCP [reactor coolant pump] seal injection flow result in only 36% of the total HPI flow [as compared to 70% of the flow of one HPI pump] going to the core.

b) 2nd 10 minutes: Operator swaps the electrical power supply for the remaining two injection valves to the operating emergency diesel generator.

c) After 20 minutes: Operator isolates the normal makeup flow and the RCP seal injection flow.

ENCLOSURE

2. Reactor Building Emergency Cooling System

Prior to Revision 23, FSAR Table 6-9, described Single Failure Analysis - Reactor Building Emergency Cooling System. Item 5 evaluated the diesel power to emergency air handling units during the event "diesel fails to start." It stated:

> "Each of the two air handling units have fixed connections to a diesel generator. The third air handling unit may be switched to either diesel generator. This arrangement assures power to two air handling units if one diesel generator is inoperative." Technical Specifcation (TS) bases B 3.6.6 also states that:
>
> "[D]uring a DBA, a minimum of one containment cooling train and one RB spray train are required to maintain the containment peak pressure and temperature below the design limits. Additionally, one RB spray train is required to remove iodine from the containment atmosphere and maintain concentrations below those assumed in the safety analysis. To ensure that these requirements are met, two RB spray trains and two containment cooling units must be OPERABLE."

FSAR revision 23 states that only one air handling unit would be available. This is necessary to prevent overloading of the diesel.