Florida Power
CORPORATION

May 18, 1990
3F0590-10

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 Cavity Annulus Seal Ring Storage

References (copies attached):

1. Letter Victor Stello, Jr. (NRC) to All PWR Licensees (except for Trojan), dated February 2, 1978

2. Letter W.P. Stewart (FPC) to NRC, Response to NRC's 2/2/78 letter, dated February 22, 1978

3. Letter W.P. Stewart (FPC) to Robert W. Reid (NRC), "Reactor Cavity Annulus Seal Ring Support", dated June 6, 1979

4. Letter Robert W. Reid (NRC) to W.P. Stewart (FPC), "Reactor Cavity Seal Ring Generic Issue (PWR)", dated September 11, 1979

Dear Sir:

In response to an NRC letter dated February 2, 1978 (Reference 1), Florida Power Corporation (FPC) committed to store the reactor cavity annulus seal ring on the floor of the containment building during plant operations until FPC and the NRC approved a new seal ring support system (Reference 3). The NRC by letter dated September 11, 1979 accepted this commitment (Reference 4).

The original concern identified the seal ring as a potential missile during a Loss Of Coolant Accident (LOCA). Calculations performed at that time showed that the seal ring missile could damage the control rod drive shroud and the control rod drives. Three postulated pipe failures were analyzed that could result in pressurization of the reactor vessel cavity - hot leg break, cold leg break, and core flood line break.

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Since that time, the probability of large pipe breaks in the primary coolant system has been determined to be sufficiently low such that dynamic effects associated with postulated pipe breaks need not be a design basis as stated in Amendment No. 89 of FPC's Facility Operating License. In addition, re-analysis by B&W of the core flood line break demonstrates that the seal ring impact as a missile on the control rod drive shroud and control rod drives is less than originally calculated and no damage occurs to the control rod drives.

Therefore, based on the above, FPC is modifying its original commitment (Reference 3) and plans to store the seal ring in its original storage location just above the reactor vessel flange during plant operations. This will minimize personnel exposure, enhance seal plate leak tightness due to less handling, and save "critical path" manhours.

If you have any questions regarding this subject, please contact Mr. Rolf C. Widell, Director, Nuclear Operations Site Support at (904) 563-4529.

Sincerely,

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

PMB/GMF

Attachments

xc: Region Administrator, Region II
Senior Resident Inspector

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

DOCKET COPY

February 2, 1978

Received Feb. 7

All PWR Licensees (except for Trojan)

Gentlemen:

During the course of responding to the staff's review of an application for license amendment on the Trojan Nuclear Plant, the licensee informed the NRC that the reactor cavity annulus seal ring (used as a water seal during refueling operations, and not removed during normal operations) and associated biological shielding over the reactor vessel cavity could become missiles in the event of a loss of coolant accident (LOCA) pipe break inside the reactor vessel cavity. At the Trojan Nuclear Plant, these missiles could affect the ability of the control rods to shut down the reactor. From our preliminary evaluation of the information provided to the NRC staff by the licensee, the Portland General Electric Company and by Westinghouse, Combustion Engineering, Babcock & Wilcox and Bechtel in telephone discussions on January 25 and 26, 1978, it appears that this problem could occur in other PWR facilities such as yours and could potentially pose a threat to the health and safety of the public in the event of a LOCA.

Therefore, pursuant to 10 CFR 50.54(f) of the Commission's regulations, you are hereby requested to deliver to the Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission, Washington, DC 20555, within 20 days of the date of this letter, i.e., February 22, 1978, the following information: (a) a statement as to whether the cavity annulus seal ring in your facility is left in place during normal operation or if biological shielding is installed in the reactor cavity annulus and, if the answer to (a) is yes; (b) when you will determine whether the cavity annulus seal ring or biological shielding could become a missile in your facility, and (c) a description of what you plan to do, and when, if the problem is found at your facility and (d) justification for continued operations until the problem has been resolved, such justification to support why continued operation will not create undue risk to the health and safety of the public.

A copy of this letter is being provided to each licensee's current service list.

Sincerely,

Victor Stello, Jr., Director
Division of Operating Reactors
Office of Nuclear Reactor Regulation

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