

**Florida
Power**
CORPORATION

May 20, 1983
3F-0583-16

Director of Nuclear Reactor Regulation
Attention: Mr. John F. Stolz, Chief
Operating Reactors Branch No. 4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
Reactor Internals Bolting

Dear Sir:

The purpose of this letter is to update the status of the Florida Power Corporation (FPC) internals bolting problem at the Crystal River Unit 3 (CR-3) reactor. Our last status letter was sent to Mr. Harold R. Denton on April 22, 1983. Additional information was provided at the briefing for NRC by the B&W Owners Group on May 13, 1983.

As of May 20, 1983, we plan to replace all upper core barrel (UCB) bolts and perform a backup ultrasonic examination on the surveillance specimen holder tube (SSHT) bolts. We do not plan to replace the lower core barrel (LCB) bolts during Refuel IV. The basis for our decisions and plans for the UCB, SSHT, and LCB bolts is given below.

Our decision to replace the UCB bolts was based on the relatively large number (51 out of 120) of ultrasonic (UT) inspection indications. We plan to replace the UCB bolts with A-286 material which has been machined into a bolt from a single piece. The transition region between the head and shank will be appropriately curved to minimize local stress. In addition the bolts will be peened in advance to reduce surface stress in use. Installation torque values and pre-stress methods will be chosen to provide a peak stress of less than 80,000 psi which is almost a factor of two below the measured yield stress for the A-286 material.

Plans for the SSHT bolts will be finalized after the UT inspection. Tooling for removal of a sample SSHT bolt is being developed should it be required. In the event replacement of some or all of the SSHT bolts is required, a supply of appropriate diameter Inconel X750 has been procured which would be suitable for fabrication into SSHT replacement fasteners.

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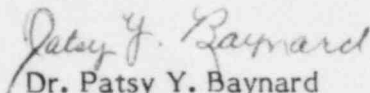
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The decision not to replace any of the LCB bolts was based on the fact that only 4 out of 108 LCB bolts exhibited indications when examined by UT and a large structural margin still exists in the joint as discussed at the May 13, 1983, meeting. Furthermore, it has been determined that failure of the lower core barrel joint is not a significant safety problem. We are continuing to explore (as a part of the B&W Owners Task Force on Reactor Internals Bolting) whether the use of Inconel X750 material would provide a suitable permanent fix for UCB and LCB bolts.

If additional information is needed, please contact Mr. G. R. Westafer, at phone (813) 866-4283.

Sincerely,


Dr. Patsy Y. Baynard
Assistant to Vice President
Nuclear Operations

LBT:mm

cc: M. B. Fairtile
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Mr. James P. O'Reilly
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