Florida Power
CORPORATION

April 15, 1983
3F-0483-11

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
NUREG-0737, Item II.F.2
Instrumentation for Detection of Inadequate Core Cooling

Dear Mr. Denton:

Florida Power Corporation (FPC) hereby provides a preliminary conceptual design of the Reactor Coolant Inventory Tracking System (RCITS) as stated in our letter to you dated March 22, 1983. FPC will install a RCITS which conforms to the design parameters specified in NUREG-0737, Item II.F.2. This was requested by the Nuclear Regulatory Commission (NRC) "Order for Modification of License" dated December 10, 1982. The RCITS technical description is provided in Attachments I and II. The RCITS is similar to the Babcock & Wilcox concept.

This conceptual design is preliminary, and as FPC has previously stated in a letter to Mr. S.J. Chilk dated March 3, 1983, and in a meeting held at the NRC offices in Bethesda, MD on March 17, 1983, FPC has contracted Stone & Webster Engineering Corporation to fully evaluate all commercially available RCITS. FPC is also evaluating the use of gamma thermometers as an ICC instrument based on the recent presentation made to the NRC on March 31, 1983. At the end of this study, FPC will choose the best RCITS for Crystal River Unit 3 and will commit to engineering, procurement and installation schedules with a very high confidence level. By July 18, 1983, FPC will have a conceptual system design and an overall schedule for engineering, procurement, and installation for an Inadequate Core Cooling instrumentation system that meets the "Order for Modification of License" requirements. Additional system information can be supplied to you by that date. The NRC checklist for compliance with Item II.F.2 will be provided to you by August 26, 1983. (Note that we will provide you with information on the status of conformance of the core-exit thermocouples and subcooling margin monitors with the requirements of NUREG-0737 Item II.F.2 by April 25, 1983, as stated in our letter to you dated March 22, 1983.) FPC will require NRC approval to proceed with procurement and installation by September 15, 1983, in order to meet our schedules.

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The preliminary schedule for engineering, procurement, and installation of the RCITS is for installation to be completed by our Refuel V which is scheduled to start Spring 1985. FPC has a 50% confidence level that the system can be completely installed during Refuel V. Delivery times of equipment may impact the installation of the system by Refuel V. Installation of the system is expected to be accomplished in steps which would allow us to complete parts of the system during outage and non-outage times. FPC has a 100% confidence level that the system can be completely installed by Refuel VI which is scheduled to start Fall 1986. FPC is presently having problems with the procurement of root valves for the decay heat drop line tap which is the bottom hot leg pressure tap. We expect to have this installation completed during our present refueling outage. This tap requires a reactor defueling which will be accomplished during the current refueling outage. However, if we cannot complete this installation our next defueling is scheduled for our Refuel VI which is our ten year inspection outage. This agrees with our 100% confidence level of system installation by Refuel VI.

Sincerely,

G R Westafer

G.R. Westafer
Manager
Nuclear Licensing and Fuel Management

Attachments

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PMR:

cc: Mr. J.P. O'Reilly, Regional Administrator
Office of Inspection & Enforcement, Region II
U.S. Nuclear Regulatory Commission
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Atlanta, GA 30303