



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

November 21, 1990

Docket No. 50-302

Mr. Percy M. Beard, Jr.
Senior Vice President,
Nuclear Operations
Florida Power Corporation
ATTN: Manager, Nuclear Operations
Licensing
P. O. Box 219-NA-21
Crystal River, Florida 32629

Dear Mr. Beard:

SUBJECT: CRYSTAL RIVER UNIT 3 - ELECTRICAL SYSTEM AND EMERGENCY DIESEL
GENERATOR IMPROVEMENTS (TAC NOS. 74119 AND 67801)

Florida Power Corporation's (FPC) letter of October 17, 1990 summarizes the subject improvements completed during the recent refueling outage and provides the status and schedule of ongoing reviews and modifications.

With regard to the emergency diesel generator (EDG), modifications were made with the intent of increasing the EDG reliability and of improving the EDG ratings as described in your letter of April 27, 1989. In addition, modifications were made to reduce projected emergency loading to within the 2000-hour rating by precluding the unnecessary automatic operation of both the low pressure injection pump and emergency feedwater pump, the conceptual design of which had previously been accepted. EDG and system tests demonstrated the capacity of the EDGs and the functioning of the modifications to reduce EDG emergency loading. As you note, voltage dips measured during the EDG testing were not entirely satisfactory. To improve these deficiencies, FPC plans to replace block loading time delay relays during the planned mid-cycle outage in late 1991, as well as to implement a testing program to adjust the dynamic response of the EDG voltage regulators.

We have been following the EDG and emergency load modifications under TAC No. 67801. Except for the voltage dip issue, which will be pursued under a new TAC, matters covered under TAC No. 67801 have been completed and the TAC is closed.

To help correct AC power distribution system problems, FPC installed a new offsite power transformer, replacing the feed from the CR-1 and 2 startup transformer. This new transformer is now the normal power source for the engineered safeguards (ES) buses. This change has eliminated voltage swings on the ES buses which in the past have caused actuation of the second level undervoltage relays.

The DC system has been improved by balancing battery loads and by replacing both safety-related battery banks with new, slightly larger-capacity cells. In addition, a new non-safety-related battery to carry non-safety loads will be installed no later than Refuel 8 and possibly by the fall 1991 mid-cycle outage.

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Problems involving the AC and DC power distribution system have been followed under TAC No. 74119. Further efforts in these areas and in environmental qualification, electrical design review, electrical calculation enhancement program, and station blackout are being and will be followed under other TAC numbers. This completes our efforts under TAC No. 74119.

Sincerely,

Original signed by

Harley Silver, Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

cc: See next page

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Mr. Percy M. Beard, Jr.
Florida Power Corporation

Crystal River Unit No. 3 Nuclear
Generating Plant

cc:

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