29, 1998

Mr. John Paul Cowan Vice President - Nuclear Production (NA2E) Florida Power Corporation **Crystal River Energy Complex** 15760 W. Power Line Street Crystal River, Florida 34428-6708

## SUBJECT: CRYSTAL RIVER UNIT 3 - STAFF EVALUATION AND ISSUANCE OF AMENDMENT RE: REACTOR BUILDING FAN ELECTRICAL LOGIC MODIFICATION (TAC NO. M99732)

Dear Mr. Cowan:

The Commission has issued the enclosed Amendment No. 166 to Facility Operating License No. DPR-72 for the Crystal River Unit 3. This amendment is in response to your request dated October 4, 1997, in which you proposed to revise the Final Safety Analysis Report (FSAR) and the Improved Technical Specification Bases to reflect the modified reactor building fan control logic for fan AHF-1C.

The amendment approves changes to the FSAR, and requires that the changes be submitted with the next update of the FSAR pursuant to 10 CFR 50.71(e). A copy of the related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/s/

Leonard A. Wiens, Senior Project Manager **Project Directorate II-3** Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

NRC FILF CENTER COPY

Docket No. 50-302

Enclosures: 1. Amendment No. 166to DPR-72 2. Safety Evaluation

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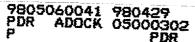
cc w/enclosures: See next page

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# UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001 April 29, 1998

Mr. John Paul Cowan Vice President - Nuclear Production (NA2E) Florida Power Corporation Crystal River Energy Complex 15760 W. Power Line Street Crystal River, Florida 34428-6708

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Leonard A. Wiens, Senior Project Manager Project Directorate II-3 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

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Mr. John Paul Cowan Florida Power Corporation

cc: Mr. Roy A. Anderson, Senior Vice President Energy Supply Florida Power Corporation ATTN: Manager, Nuclear Licensing Crystal River Energy Complex (SA2A) 15760 W. Power Line Street Crystal River, Florida 34428-6708

Mr. R. Alexander Glenn Corporate Counsel Florida Power Corporation MAC-A5A P.O. Box 14042 St. Petersburg, Florida 33733-4042

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Mr. Robert B. Borsum Framatome Technologies Inc. 1700 Rockville Pike, Suite 525 Rockville, Maryland 20852

Mr. Bill Passetti Office of Radiation Control Department of Health and Rehabilitative Services 1317 Winewood Blvd. Tallahassee, Florida 32399-0700

Attorney General Department of Legal Affairs The Capitol Tallahassee, Florida 32304

Mr. Joe Myers, Director Division of Emergency Preparedness Department of Community Affairs 2740 Centerview Drive Tallahassee, Florida 32399-2100

### **CRYSTAL RIVER UNIT NO. 3**

Chairman Board of County Commissioners Citrus County 110 North Apopka Avenue Iverness, Florida 34450-4245

Mr. Robert E. Grazio, Director Nuclear Regulatory Affairs (SA2A) Florida Power Corporation Crystal River Energy Complex 15760 W. Power Line Street Crystal River, Florida 34428-6708

Senior Resident Inspector Crystal River Unit 3 U.S. Nuclear Regulatory Commission 6745 N. Tallahassee Road Crystal River, Florida 34428

Mr. Gregory H. Halnon Acting Director, Quality Programs (SA2B) Florida Power Corporation Crystal River Energy Complex 15760 W. Power Line Street Crystal River, Florida 34428-6708

Regional Administrator, Region II U.S. Nuclear Regulatory Commission 61 Forsyth Street, SW., Suite 23T85 Atlanta, GA 30303-3415

Mr. Kerry Landis U.S. Nuclear Regulatory Commission 61 Forsyth Street, SW., Suite 23T85 Atlanta, GA 30303-3415



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

## FLORIDA POWER CORPORATION CITY OF ALACHUA CITY OF BUSHNELL CITY OF GAINESVILLE CITY OF KISSIMMEE CITY OF LEESBURG CITY OF NEW SMYRNA BEACH AND UTILITIES COMMISSION. CITY OF NEW SMYRNA BEACH CITY OF OCALA ORLANDO UTILITIES COMMISSION AND CITY OF ORLANDO SEMINOLE ELECTRIC COOPERATIVE. INC. CITY OF TALLAHASSEE

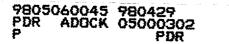
## DOCKET NO. 50-302

## CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT

## AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 166 License No. DPR-72

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Florida Power Corporation, et al. (the licensees) dated October 4, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (I) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and



- E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
- Accordingly, changes to the updated Final Safety Analysis Report (FSAR) to reflect changes to the Reactor Building Cooling Fan AHF-1C electrical logic at Crystal River Unit 3, as set forth in the application for amendment by Florida Power Corporation dated October 4, 1997 are authorized. The licensee shall submit the revised description authorized by this amendment with the next update of the FSAR in accordance with 10 CFR 50.71(e).
- 3. This license amendment is effective as of its date of issuance and shall be implemented as specified in (2), above.

FOR THE NUCLEAR REGULATORY COMMISSION

Frederick J. Hebdon, Director Project Directorate II-3 Division of Reactor Projects - I/II Office of Nuclear Reactor Regulation

Date of Issuance: April 29, 1998



UNITED STATES NUCLEAR REGULATORY COMMISSION

## WASHINGTON, D.C. 20555-0001

## SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

## RELATED TO AMENDMENT NO. 166 TO FACILITY OPERATING LICENSE NO. DPR-72

## FLORIDA POWER CORPORATION

## **CRYSTAL RIVER UNIT 3**

## **DOCKET NO. 50-302**

#### 1.0 INTRODUCTION

By letter dated October 4, 1997, Florida Power Corporation provided plans to modify the reactor building fan cooler (RBFC) electrical logic and requested an amendment to the Crystal River Unit 3 Operating License that would authorize changes to Technical Specification Bases and the Final Safety Analysis Report (FSAR). The licensee determined that the proposed changes would constitute an Unresolved Safety Question and thus require staff approval prior to implementation.

During a loss-of-coolant accident (LOCA), reactor building cooling is provided by the reactor building spray system and the RBFC system. The reactor building fan cooler (RBFC) system has three fan coolers (AHF-1A, AHF-1B, and AHF-1C). Currently either AHF-1A or AHF-1B is automatically started in response to a reactor building isolation and cooling (RBIC) signal and the RBFC that is not started is configured as an automatic backup in case the first RBFC does not start. Presently AHF-1C is not used in response to an RBIC signal. The proposed modifications would allow AHF-1C to be substituted for either AHF-1A or AHF-1B as the lead or backup RBFC.

#### 2.0 **EVALUATION**

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AHF-1C was originally designed as a swing fan to be used as a substitute or supplement during normal cooling and was administratively removed from service because of potential excessive diesel loading concerns and service water limitations. The licensee has proposed a modification to the electrical logic to allow AHF-1C to be substituted for either AHF-1A or AHF-1B. In order to prevent loading more than one RBFC on an emergency diesel generator and to ensure proper alignment of the RBFCs and the power sources, the licensee has provided automatic start permissive interlocks, relays, operating procedures, and alarms. The logic would allow any one of the three RBFCs to be selected as the lead RBFC and either of the two remaining RBFCs to be selected as the automatic backup in the event of RBIC signal.

The new logic circuit adds a level of complexity to the starting of the RBFCs because its proper operation depends upon additional interlocks, relays, and relay contacts that have been added to provide this new logic. A potential single failure in the logic circuits that could result in no RBFCs operating is bounded by the licensee's previous analysis that was performed to evaluate failure of the service water system, resulting in no cooling water to the RBFCs. This condition was previously evaluated and found acceptable because reactor building cooling can be accomplished by the use of both trains of the reactor building spray system. Based on the above evaluation, the staff concludes that the Unresolved Safety Question regarding new credible failure modes is bounded by the licensee's previous analysis and the proposed modification continues to provide reasonable assurance that adequate containment cooling would be available when required. Therefore, the staff finds the proposed modification of the RBFC electrical logic to be acceptable.

#### 3.0 STATE CONSULTATION

Based upon written notice of the proposed amendment, the Florida State official had no comments.

#### 4.0 ENVIRONMENTAL CONSIDERATIONS

The amendment changes requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The U.S. Nuclear Regulatory Commission staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding (63 FR 2423). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 5.0 CONCLUSION

Based on its evaluation, the staff concludes that the proposed modifications to the AHF-1C electrical logic are acceptable because new credible failure modes are bounded by a previously approved analysis. The staff, therefore, concludes that the licensee's proposed changes to FSAR and Bases sections of the plant technical specifications are acceptable.

Principal Contributor: Barry S. Marcus

Dated: April 29, 1998

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