January 29, 2002

Mr. Dale E. Young, Vice President
Crystal River Nuclear Plant (NA1B)
ATTN: Supervisor, Licensing & Regulatory Programs
15760 W. Power Line Street
Crystal River, Florida 34428-6708

SUBJECT: CRYSTAL RIVER UNIT 3 - ISSUANCE OF AMENDMENT TO REVISE THE EMERGENCY DIESEL GENERATOR LOSS OF POWER START LIMITING CONDITION FOR OPERATION (TAC NO. MB1222)

Dear Mr. Young:

The Commission has issued the enclosed Amendment No. 202 to Facility Operating License No. DPR-72 for the Crystal River Unit 3. The amendment consists of changes to the existing Improved Technical Specification 3.3.8, "Emergency Diesel Generator (EDG) Loss of Power Start (LOPS)," in response to your letter dated February 21, 2001, as supplemented April 26, 2001. The amendment revises the actions to be taken in the event that one or more channels of the loss of voltage or degraded voltage EDG start functions become inoperable.

A copy of the Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/
John M. Goshen, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosures:
1. Amendment No. 202 to DPR-72
2. Safety Evaluation

cc w/enclosures: See next page

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January 29, 2002

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DATE	01/02/02	01/02/02	01/18/02	01/22/02

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FLORIDA POWER CORPORATION
CITY OF ALACHUA
CITY OF BUSHNELL
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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.

DOCKET NO. 50-302

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 202
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 February 21, 2001, as supplemented April 26, 2001, 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.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-72 is hereby amended to read as follows:

   Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 202, are hereby incorporated in the license. Florida Power Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/
Richard P. Correia, Chief, Section 2
Project Directorate II
Division of Project Licensing Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the
Technical Specifications

Date of Issuance: January 29, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 202
FACILITY OPERATING LICENSE NO. DPR-72

DOCKET NO. 50-302

Replace the following pages of the Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove	Insert
3.3-20	3.3-20
3.3-21	3.3-21
B3.3-69	B3.3-69
B3.3-70	B3.3-70
B3.3-71	B3.3-71

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 202 TO FACILITY OPERATING LICENSE NO. DPR-72

FLORIDA POWER CORPORATION, ET AL.

CRYSTAL RIVER UNIT NO. 3 NUCLEAR GENERATING PLANT

DOCKET NO. 50-302

1.0 INTRODUCTION

By letter dated February 21, as supplemented April 26, 2001, Florida Power Corporation (FPC) submitted License Amendment Request (LAR) Number 265, Revision 0 for the Crystal River Unit 3 (CR-3) Facility Operating License No. DPR-72. The LAR proposed changes to the CR-3 Improved Technical Specifications (ITS) 3.3.8, "Emergency Diesel Generator (EDG) Loss of Power Start (LOPS)." The proposed changes are intended to ensure that actions appropriate to the CR-3-specific LOPS circuits are taken in the event that one or more channels of loss of voltage or degraded voltage EDG start functions become inoperable. The additional information provided by FPC in the letter dated April 26, 2001, did not change the initial proposed no significant safety hazards consideration determination.

2.0 BACKGROUND

The CR-3 ITS 3.3.8 specifies the required actions to be taken in the event one or more channels of the loss of voltage function or the degraded voltage function of the EDG LOPS instrumentation become inoperable. At CR-3 the loss of voltage function is performed by first level undervoltage relays (FLURs). The degraded voltage function is performed by second level undervoltage relays (SLURs). The FLURs and the SLURS sense the voltage of the engineered safeguards (ES) 4160 volt buses. The intent is that the FLURs will detect a complete loss of voltage on the ES buses and the SLURs will detect a low (degraded) voltage on the ES buses.

Each channel of the loss of voltage function consists of a FLUR and an associated auxiliary relay. An ES bus loss of voltage condition detected by a FLUR will actuate its associated auxiliary relay after a 7.8-second time delay, thereby, actuating that loss of voltage channel. There are a total of three loss of voltage channels on each ES bus combined into two-out-of-three logic that, when actuated, send a command to start the associated EDG, open the ES bus feeder and load breakers (except for running Block 1 loads), and start a 3-second timer for EDG breaker closure. In the event an engineered safeguards actuation system (ESAS) actuation occurs coincident with actuation of the loss of voltage function, the FLURs also provide an input to block the loading of the safety equipment onto the associated EDG (with the exception of Block 1 loads) until the loss of voltage condition clears (two-out-of-three FLURs reset).

ENCLOSURE

Each ES 4160 volt bus is also provided with three degraded voltage channels. Each degraded voltage channel consists of an SLUR and an associated time delay relay. A degraded voltage condition (ES bus voltage less than setpoint for 5 seconds) detected by three-out-of-three SLURs will send a start command to the associated EDG. If the degraded voltage condition persists for an additional 13 seconds, the affected bus ES bus feeder and load breakers will be opened (except for running Block 1 loads) and a 3-second timer for EDG breaker closure will start. There is no blocking of safety equipment loading on coincident ESAS and degraded voltage (SLUR) actuations comparable to that which occurs in the loss of voltage (FLUR) design.

Guidance for this Limiting Condition for Operation (LCO) is provided in NUREG 1430 (Standard Technical Specifications: Babcock and Wilcox Plants).

3.0 EVALUATION

FPC states that, in implementing the guidance for the EDG LOPS instrumentation provided in NUREG-1430 (Standard Technical Specifications: Babcock and Wilcox Plants), they did not fully consider the CR-3 specific configuration of the loss of voltage and degraded voltage actuation logic, or the interaction of the FLURs with the ESAS automatic actuation logic.

If one channel of the loss of voltage function should become inoperable, CR-3 ITS 3.3.8 currently requires that the channel (the FLUR) be placed in trip. While this action satisfies the requirements of ITS 3.3.8, it renders the ESAS function of the loss of voltage instrumentation inoperable. FPC explains in its February 21, 2001, letter that placing a FLUR in a tripped condition would result in a loss of redundancy for the associated channel of ESAS actuation logic; and entry into CR-3 ITS 3.3.7, “ESAS Automatic Actuation Logic,” Condition A would be required. The reason for the loss of redundancy in the ESAS function is that the two-out-of-three FLURS that must reset in order to unblock the loading of safety equipment onto the EDG, revert to two-out-of-two when one FLUR is permanently tripped. FPC states in its April 26, 2001, letter that the ESAS specification requires all three of the logic channels to be operable.

Another problem with the current version of CR-3 ITS 3.3.8 is that the specification treats the loss of voltage function and the degraded voltage function identically. The loss of voltage actuation logic, however, is two-out-of-three and the degraded voltage actuation logic is three-out-of-three. It is, therefore, not correct to treat both functions in an identical fashion.

FPC’s solution to this CR-3-specific dilemma is to create requirements in CR-3 ITS 3.3.8 that are different for the loss of voltage function than they are for the degraded voltage function. Action A in the proposed specification requires that, when one channel of loss of voltage per EDG is inoperable, the channel must be restored to operable status within 72 hours. This would replace the current requirement to place the loss of voltage channel in trip within one hour, necessitating entry into LCO 3.3.7. If the 72-hour Completion Time of Action A is not met, Action D in the proposed specification requires that the plant begin to shut down. The 72-hours completion time allowed by Action A is consistent with other technical specification completion times involving a loss of redundancy.

When one or two channels of the degraded voltage function per EDG are inoperable, Action B in the proposed specification requires that the channel(s) be placed in trip within 1 hour. If the 1-hour completion time is not met, Action E in the proposed specification requires that the EDG

specification immediately be entered for the EDG made inoperable by the EDG LOPS instrumentation. These actions and completion times are appropriate for this condition since inoperability of one or two channels of the three-out-of-three degraded voltage logic represents a loss of function. Tripping the affected channel(s) restores the function (logic reverts to two-out-of-two or one-out-of-one). Unlike the loss of voltage function, the degraded voltage function does not interface with the ESAS automatic actuation logic. Therefore, tripping a degraded voltage channel will not affect the operability of the ESAS logic.

Action C of the revised specification requires that, when two or more channels of the loss of voltage function or three channels of the degraded function per EDG are inoperable, the EDG specification immediately be entered for the EDG made inoperable by the EDG LOPS instrumentation. Under this condition, which represents a loss of function, tripping of the inoperable channels is not an option since doing so would result in an EDG actuation.

4.0 STATE CONSULTATION

Based upon a letter dated March 8, 1991, from Mary E. Clark of the State of Florida, Department of Health and Rehabilitative Services, to Deborah A. Miller, Licensing Assistant, U.S. Nuclear Regulatory Commission, the State of Florida does not desire notification of issuance of license amendments.

5.0 ENVIRONMENTAL CONSIDERATIONS

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (66 FR 15925), dated March 21, 2001. Accordingly, these amendments meet 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 these amendments.

6.0 CONCLUSION

The staff finds that the changes proposed by FPC satisfactorily resolve the conflict between ITS 3.3.8 and ITS 3.3.7. The changes proposed by FPC also correctly tailor the requirements to the specific actuation logic for the loss of voltage function and the degraded voltage function. The required actions and their associated completion times are generally consistent with other comparable technical specification requirements and NUREG 1470. The staff finds these changes acceptable.

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: James Lazevnick, Carl Schulten, NRR

Date: January 29, 2002