

July 14, 2003

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 REGARDING  
TECHNICAL SPECIFICATION CHANGE REQUEST FOR CONTAINMENT  
REQUIREMENTS DURING IRRADIATED FUEL HANDLING AND CORE  
ALTERATIONS (TAC NO. MB6503)

Dear Mr. Young:

The Commission has issued the enclosed Amendment No. 208 to Facility Operating License No. DPR-72 for Crystal River Unit 3 (CR-3). The amendment consists of changes to the existing Technical Specifications (TS) in response to your letter dated October 11, 2002, as supplemented March 4, 2003.

The amendment revises CR-3 Improved Technical Specifications (ITS) 3.3.15, "Reactor Building Purge Isolation-High Radiation"; ITS Bases 3.7.15, "Spent Fuel Assembly Storage"; ITS 3.9.3, "Containment Penetrations"; and ITS 3.9.6, "Refueling Canal Water Level" to account for the handling of irradiated fuel within containment that has not occupied part of a critical reactor core within the previous 72 hours. The TS change implements the Nuclear Energy Institute Technical Specification Task Force (TSTF) change traveler TSTF-51, Revision 2, as applicable.

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/**

Brenda L. Mozafari, Senior 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. 208 to DPR-72
2. Safety Evaluation

cc w/enclosures: See next page

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Distribution:

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2. Safety Evaluation

PUBLIC	OGC
PDII-2 R/F	ACRS
EHackett	GHill (2)
RDennig	JMunday, RII
RGiardina	
AHowe	

cc w/enclosures: See next page

Adams: ML031950582

OFFICE	PM:PDII/S2	LA:PDII/S2	OGC	SC:PDII/SC
NAME	BMozafari:as	EDunnington	AHodgon	AHowe
DATE	7/8/2003	7/9/2003	7/8/2003	7/11/2003

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**OFFICIAL RECORD COPY**

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.

DOCKET NO. 50-302

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.208  
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 11, 2002, as supplemented March 4, 2003, 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. 208, 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 the date of its issuance, and shall be implemented prior to entering Mode 6 for the Cycle 13 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Allen G. Howe, Chief, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical Specifications

Date of Issuance: July 14, 2003

ATTACHMENT TO LICENSE AMENDMENT NO. 208

FACILITY OPERATING LICENSE NO. DPR-72

DOCKET NO. 50-302

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

Remove

3.3-35  
3.9-4  
3.9-11  
B 3.3-114  
B 3.3-115  
B 3.3-116  
B 3.7-75  
B 3.9-9  
B 3.9-10  
B 3.9-11  
B 3.9-12  
B 3.9-13  
B 3.9-23  
B 3.9-24  
B 3.9-25

Insert

3.3-35  
3.9-4  
3.9-11  
B 3.3-114  
B 3.3-115  
B 3.3-116  
B 3.7-75  
B 3.9-9  
B 3.9-10  
B 3.9-11  
B 3.9-12  
B 3.9-13  
B 3.9-23  
B 3.9-24  
B 3.9-25

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 208 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 October 11, 2002, as supplemented by letter dated March 4, 2003, Florida Power Corporation (the licensee, doing business as Progress Energy Florida, Inc.) proposed changes to the Crystal River Nuclear Plant Unit 3 (CR-3) Technical Specifications (TS) applicable to the handling of irradiated fuel in the Containment and Fuel Handling Building, and selected specifications associated with CORE ALTERATIONS. The purpose is to establish a point where OPERABILITY of those systems typically used to mitigate the consequences of a fuel handling accident (FHA) is no longer required to meet the Standard Review Plan guidance offsite dose limits (i.e., less than 25 percent of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 100 limits or the limits specified in 10 CFR 50.67). Specifically, the proposal identifies that only “recently” irradiated fuel contains sufficient fission products to require OPERABILITY of accident mitigation features to meet the accident analysis assumptions. Therefore, the APPLICABILITY requirements for the associated mitigation features are revised. The requested changes would eliminate TS requirements for engineered safety features (ESF) during core alterations, other than irradiated fuel movement. The affected TS Limiting Conditions for Operations (LCOs) are as follows:

- 3.3.15, Reactor Building (RB) Purge Isolation – High Radiation
- 3.9.3, Containment Penetrations
- 3.9.6, Refueling Canal Water Level

The corresponding sections of the TS Bases are also affected. FPC used NRC-approved Technical Specification Task Force (TSTF)-51, Revision 2, as the model for its requested changes.

The March 4, 2003, supplement contained clarifying information only and did not change the initial no significant hazards consideration determination or expand the scope of the initial application.

## 2.0 BACKGROUND

The U. S. Nuclear Regulatory Commission (NRC) staff approved a revised FHA dose analysis for CR-3 in Amendment No. 199 dated September 17, 2001, which takes credit for a radioactive decay period of 72 hours based on an alternative source term pursuant to 10 CFR 50.67 and

the guidance of Regulatory Guide (RG) 1.183 "Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors." Given this decay period, the licensee is now proposing changes to redefine the TS requirements by relaxing Containment and Fuel Handling Building integrity requirements and making those ESF systems originally relied upon to mitigate an FHA applicable only for the movement of fuel that has been "recently irradiated." The term "recently irradiated" is a cycle-specific number and represents the decay period for the reduction in radionuclide inventory available for release in the event of an FHA. For the upcoming refueling outage, the licensee has determined that the appropriate decay period will be 72 hours. In summary, once the reactor has been shut down for a minimum of 72 hours, the licensee has demonstrated that the FHA reanalysis (that does not rely on either building integrity or the FHA mitigating systems) will not exceed offsite dose limitations. The TS Bases will be revised to provide a cycle-specific definition of "recently irradiated" fuel.

### 3.0 REGULATORY EVALUATION

The applicable regulatory requirements and guidelines are :

- 10 CFR Sections 50.36, 50.67, 50.90, and 50.92.
- RG 1.183 "Alternative Radiological Source Term for Evaluating Design Basis Accidents at Nuclear Power Plants" July 2000.
- Technical Specification Task Force Traveler TSTF-51, Revision 2. Approved by the NRC on October 13, 1999.
- The model TS contained in the improved standard technical specifications (STS), NUREG-1430, Revision 2, "Standard Technical Specifications, Babcock and Wilcox Plants" dated October 10, 2001.

### 4.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's regulatory and technical analyses in support of its proposed license amendment, which are described in the licensee's application. The evaluation below supports the conclusion 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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

The licensee proposed modifications to the TS by revising the APPLICABILITY statements for shutdown conditions for structures (e.g., containment) and systems previously used to mitigate the consequences of an FHA. The APPLICABILITY statements for TS 3.3.15, 3.9.3, and 3.9.6 were to be revised as follows:

- (1) Replace the current APPLICABILITY of TS 3.3.15 and modify the current APPLICABILITY of TS 3.9.3 to state the following "During movement of recently irradiated fuel assemblies within containment," and
- (2) Delete "During Core Alterations" from TS 3.9.3 and 3.9.6.

In order to implement the above APPLICABILITY statements, the Limiting Conditions for Operation (LCOs) for INTEGRITY and for the selected ESF systems need only apply when handling fuel that has recently been in the critical reactor core (i.e., "recently irradiated fuel"). The TS Bases will be revised to identify "recently irradiated fuel" as fuel that has occupied part of a critical reactor core within the previous 72 hours. In addition, consistent with the instructions in TSTF-51, Revision 2, regarding decreasing doses even further below that provided by natural decay, the licensee has committed in a supplement dated March 4, 2003, to follow the guidelines of NUMARC 93-01, Revision 3, Section 11.3.6, "Assessment Methods for Shutdown Conditions," Subsection 5, "Containment - Primary (PWR)/Secondary (BWR)."

The deletion of the CORE ALTERATIONS term is justified since an FHA is the only event during CORE ALTERATIONS that is postulated to result in fuel damage and radiological release, and such FHAs will be fully enveloped by the proposed APPLICABILITY.

In addition to the above changes to the APPLICABILITY statements, the licensee proposed numerous corresponding changes to the ACTION statements, such as elimination of references to CORE ALTERATIONS and the insertion of "recently irradiated fuel" when referring to the movement of irradiated fuel. The proposed changes do not impact TS requirements for systems needed to prevent or mitigate CORE ALTERATION events other than the FHA. They also do not change the requirements for systems needed for decay heat removal or the requirements to maintain the specified water levels over irradiated fuel. Since the proposed revisions to the TS do not result in changes to the design basis, we conclude that these revisions are acceptable.

## 5.0 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.

## 6.0 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. 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 (68 FR 5676). 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.

## 7.0 CONCLUSION

The NRC staff 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: R. J. Giardina, NRR

Date: July 14, 2003

Mr. Dale E. Young  
Florida Power Corporation

Crystal River Nuclear Plant, Unit 3

cc:

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