April 5, 2005

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 ELIMINATION OF REQUIREMENTS FOR HYDROGEN MONITORS USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS (TAC NO. MC4452)

Dear Mr. Young:

The Commission has issued the enclosed Amendment No. 216 to Facility Operating License No. DPR-72 for Crystal River Unit 3. The amendment consists of changes to the existing Technical Specifications (TS) in response to your letter dated September 21, 2004.

The amendment revises the TS by eliminating the requirements associated with hydrogen monitors. The changes support the implementation of a revision to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.44, "Combustible gas control for nuclear power reactors." A notice of availability for this TS improvement using the consolidated line item improvement process was published in the *Federal Register* on September 25, 2003 (68 FR 55416).

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. 216 to DPR-72
2. Safety Evaluation

cc w/enclosures: See next page

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Distribution:

PUBLIC	PDII-2 Reading	EHackett	MMarshall
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NAME	MThorpe-Kavanaugh	WReckley	BMozafari	EDunnington	MMarshall	
DATE	1 /10/05	2/4/05	3/23/05	3/18/05	3/28/05	

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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. 216
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 September 21, 2004, 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. 216, 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/

Michael L. Marshall, 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: April 5, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 216

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	Insert
3.3-40	3.3-40
3.3-41	3.3-41

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 216 TO FACILITY OPERATING LICENSE NO. DPR-72

FLORIDA POWER CORPORATION, ET AL.

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT

DOCKET NO. 50-302

1.0 INTRODUCTION

By application dated September 21, 2004, Florida Power Corporation (the licensee, also doing business as Progress Energy Florida, Inc.) proposed changes to the Crystal River Unit 3 (CR-3) Technical Specifications (TS) (ADAMS Accession No. ML042680432). The proposed changes would delete the TS requirements associated with hydrogen monitors.

The Nuclear Regulatory Commission (NRC) has revised Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors." The amended standards eliminated the requirements for hydrogen recombiners and relaxed the requirements for hydrogen and oxygen monitoring. In letters dated December 17, 2002, and May 12, 2003, the Nuclear Energy Institute (NEI) Technical Specification Task Force (TSTF) proposed to remove requirements for hydrogen recombiners and hydrogen and oxygen monitors from the standard technical specifications (STS) (NUREGs 1430 - 1434) on behalf of the industry to incorporate the amended standards. This proposed change is designated TSTF-447.

The NRC staff prepared this model safety evaluation (SE) for the elimination of requirements regarding containment hydrogen recombiners and the removal of requirements from TS for containment hydrogen and oxygen monitors and solicited public comment (67 FR 50374, published August 2, 2002) in accordance with the Consolidated Line Item Improvement Process (CLIIP). The use of the CLIIP in this matter is intended to help the NRC to efficiently process amendments that propose to remove the hydrogen recombiner and hydrogen and oxygen monitor requirements from TS. Licensees of nuclear power reactors to which this model applies were informed (68 FR 55416; September 25, 2003) that they could request amendments conforming to the model and, in such requests, should confirm the applicability of the SE to their reactors and provide the requested plant-specific verifications and commitments.

2.0 BACKGROUND

Regulatory Issue Summary 2000-06, "Consolidated Line Item Improvement Process for Adopting Standard Technical Specification Changes for Power Reactors," was issued on March 20, 2000. The CLIIP is intended to improve the efficiency of NRC licensing processes. This is accomplished by processing proposed changes to the STS in a manner that supports subsequent license amendment applications. The CLIIP includes an opportunity for the public to comment on proposed changes to the STS following a preliminary assessment by the NRC staff and finding that the change will likely be offered for adoption by licensees. The NRC staff evaluates any comments received for a proposed change to the STS and either reconsiders the change or proceeds with announcing the availability of the change for proposed adoption by

licensees. Those licensees opting to apply for the subject change to TS are responsible for reviewing the NRC staff's evaluation, referencing the applicable technical justifications, and providing any necessary plant-specific information. Each amendment application made in response to the notice of availability would be processed and noticed in accordance with applicable rules and NRC procedures.

The Commission's regulatory requirements related to the content of TS are set forth in 10 CFR 50.36. This regulation requires that the TS include items in five specific categories. These categories include 1) safety limits, limiting safety system settings, and limiting control settings; 2) limiting conditions for operation (LCOs); 3) surveillance requirements; 4) design features; and 5) administrative controls. However, the regulation does not specify the particular TS to be included in a plant's license.

Additionally, 10 CFR 50.36(c)(2)(ii) sets forth four criteria to be used in determining whether an LCO is required to be included in the TS. These criteria are as follows:

1. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

2. A process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that assumes either the failure of or presents a challenge to the integrity of a fission product barrier.

3. A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design-basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

4. A structure, system, or component that operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

Existing LCOs and related surveillances included as TS requirements that satisfy any of the criteria stated above must be retained in the TS. Those TS requirements that do not satisfy these criteria may be relocated to other licensee-controlled documents.

As part of the rulemaking that revised 10 CFR 50.44, the Commission retained requirements for ensuring a mixed atmosphere, inerting Mark I and II containments, and providing hydrogen control systems capable of accommodating an amount of hydrogen generated from a metal-water reaction involving 75 percent of the fuel cladding surrounding the active fuel region in Mark III and ice condenser containments. The Commission eliminated the design-basis loss-of-coolant accident (LOCA) hydrogen release from 10 CFR 50.44 and consolidated the requirements for hydrogen and oxygen monitoring to 10 CFR 50.44 while relaxing safety classifications and licensee commitments to certain design and qualification criteria. The Commission also relocated without change the hydrogen control requirements in 10 CFR 50.34(f) to 10 CFR 50.44 and the high point vent requirements from 10 CFR 50.44 to 10 CFR 50.46a.

3.0 EVALUATION

The ways in which the requirements and recommendations for combustible gas control were incorporated into the licensing bases of commercial nuclear power plants varied as a function of

when plants were licensed. Plants that were operating at the time of the Three Mile Island (TMI), Unit 2 accident are likely to have been the subject of confirmatory orders that imposed the combustible gas control functions described in NUREG-0737, "Clarification of TMI Action Plan Requirements," as obligations. The issuance of plant-specific amendments to adopt these changes, which would remove hydrogen recombiner and hydrogen and oxygen monitoring controls from TS, supersede the combustible gas control specific requirements imposed by post-TMI confirmatory orders.

3.1 Hydrogen Monitoring Equipment

Section 50.44(b)(1), the STS, and plant-specific TS currently contain requirements for monitoring hydrogen. Licensees have also made commitments to design and qualification criteria for hydrogen monitors in Item II.F.1, Attachment 6 of NUREG-0737 and Regulatory Guide (RG) 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident." The hydrogen monitors are required to assess the degree of core damage during a beyond-design-basis accident and confirm that random or deliberate ignition has taken place. If an explosive mixture that could threaten containment integrity exists during a beyond-design-basis accident, then other severe accident management strategies, such as purging and/or venting, would need to be considered. The hydrogen monitors are needed to implement these severe accident management strategies.

With the elimination of the design-basis LOCA hydrogen release, hydrogen monitors are no longer required to mitigate design-basis accidents and, therefore, the hydrogen monitors do not meet the definition of a safety-related component as defined in 10 CFR 50.2. RG 1.97 recommends classifying the hydrogen monitors as Category 1. RG 1.97 Category 1 is intended for key variables that most directly indicate the accomplishment of a safety function for design-basis accident events and, therefore, are items usually addressed within TS. As part of the rulemaking to revise 10 CFR 50.44, the Commission found that the hydrogen monitors no longer meet the definition of Category 1 in RG 1.97. The Commission concluded that Category 3, as defined in RG 1.97, is an appropriate categorization for the hydrogen monitors because the monitors are required to diagnose the course of beyond-design-basis accidents. Hydrogen monitoring is not the primary means of indicating a significant abnormal degradation of the reactor coolant pressure boundary. Section 4 of Attachment 2 to SECY-00-0198, "Status Report on Study of Risk-Informed Changes to the Technical Requirements of 10 CFR Part 50 (Option 3) and Recommendations on Risk-Informed Changes to 10 CFR 50.44 (Combustible Gas Control)," found that the hydrogen monitors were not risk-significant. Therefore, the NRC staff finds that hydrogen monitoring equipment requirements no longer meet any of the four criteria in 10 CFR 50.36(c)(2)(ii) for retention in TS and, therefore, may be relocated to other licensee-controlled documents. However, because the monitors are required to diagnose the course of beyond-design-basis accidents, each licensee should verify that it has, and make a regulatory commitment to maintain, a hydrogen monitoring system capable of diagnosing beyond-design-basis accidents.

The elimination of Post-Accident Sampling System requirements from some plant-specific TS (and associated CLIIP notices) indicated that during the early phases of an accident, safety-grade hydrogen monitors provide an adequate capability for monitoring containment hydrogen concentration. The NRC staff has subsequently concluded that Category 3 hydrogen monitors also provide an adequate capability for monitoring containment hydrogen concentration during the early phases of an accident.

4.0 VERIFICATIONS AND COMMITMENTS

As requested by the NRC staff in the notice of availability for this TS improvement, the licensee has addressed the following plant-specific verifications and commitments.

4.1 Each licensee should verify that it has, and make a regulatory commitment to maintain, a hydrogen monitoring system capable of diagnosing beyond-design-basis accidents.

The licensee has verified that it has a hydrogen monitoring system capable of diagnosing beyond-design-basis accidents. The licensee has committed to maintain the hydrogen monitors within its Final Safety Analysis Report (FSAR). The FSAR will be revised during the next scheduled update following the issuance of this license amendment.

The NRC staff finds that reasonable controls for the implementation and for subsequent evaluation of proposed changes pertaining to the above regulatory commitments are provided by the licensee's administrative processes, including its commitment management program. Should the licensee choose to incorporate a regulatory commitment into the emergency plan, FSAR, or other document with established regulatory controls, the associated regulations would define the appropriate change-control and reporting requirements. The NRC staff has determined that the commitments do not warrant the creation of regulatory requirements that would require prior NRC approval of subsequent changes. The NRC staff has agreed that NEI 99-04, Revision 0, "Guidelines for Managing NRC Commitment Changes," provides reasonable guidance for the control of regulatory commitments made to the NRC staff. (See Regulatory Issue Summary 2000-17, "Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff," dated September 21, 2000.) The commitments should be controlled in accordance with the industry guidance or comparable criteria employed by a specific licensee. The NRC staff may choose to verify the implementation and maintenance of these commitments in a future inspection or audit.

5.0 STATE CONSULTATION

Based upon a letter dated May 2, 2003, from Michael N. Stephens of the Florida Department of Health, Bureau of Radiation Control, to Brenda L. Mozafari, Senior Project Manager, 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 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 (70 FR 5245). 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 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 Contributor: W. Reckley

Date: April 5, 2005

cc:

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