UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 24, 2012

Mr. Jon A. Franke, Vice President
Crystal River Nuclear Plant (NA2C)
ATTN: Supervisor, Licensing & Regulatory Programs
15760 W. Power Line Street
Crystal River, Florida 34428-6708

SUBJECT: CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING – ISSUANCE OF AMENDMENT REGARDING IMPROVED TECHNICAL SPECIFICATIONS 3.7.19 DIESEL DRIVEN EMERGENCY FEEDWATER PUMP FUEL OIL, LUBE OIL AND STARTING AIR (TAC NO. ME5747)

Dear Mr. Franke:

The Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 240 to Facility Operating License No. DPR-72 for Crystal River Unit 3 Nuclear Generating Plant (CR-3) in response to your letter dated February 25, 2011, as replaced in its entirety by letter dated January 19, 2012. The amendment revised the CR-3 Improved Technical Specification (ITS) 3.7.19, Condition A and ITS Surveillance Requirement 3.7.19.1, in order to increase the ITS minimum required stored diesel fuel for the diesel driven emergency feedwater pump in the fuel oil storage tank.

A copy of the safety evaluation is enclosed. A notice of issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Farideh E. Saba

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosures:
1. Amendment No. 240 to DPR-72
2. Safety Evaluation

cc w/enclosures: Distribution via ListServ

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NUCLEAR REGULATORY COMMISSION
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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. 240
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 25, 2011, as replaced in its entirety by letter dated January 19, 2012, 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 Title 10 of the *Code of Federal Regulations* (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.

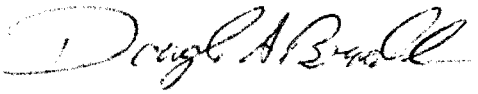
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-72 is hereby amended to read as follows:

   Technical Specifications

   The Technical Specifications contained in Appendix A as revised through Amendment No. 240, 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



Douglas A. Broaddus, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Operating License
and Technical Specifications

Date of Issuance: February 24, 2012

ATTACHMENT TO LICENSE AMENDMENT NO. 240

FACILITY OPERATING LICENSE NO. DPR-72

DOCKET NO. 50-302

Replace the following page of Facility Operating License DPR-72 with the attached revised page.

Remove	Insert
4	4

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
3.7-39	3.7-39
3.7-40	3.7-40

of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

2.C.(1) Maximum Power Level

Florida Power Corporation is authorized to operate the facility at a steady state reactor core power level not in excess of 2609 Megawatts (100 percent of rated core power level).

2.C.(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 240, are hereby incorporated in the license. Florida Power Corporation shall operate the facility in accordance with the Technical Specifications.

The Surveillance Requirements contained in the Appendix A Technical Specifications and listed below are not required to be performed immediately upon implementation of Amendment 149. The Surveillance Requirements shall be successfully demonstrated prior to the time and condition specified below for each.

a) SR 3.3.8.2.b shall be successfully demonstrated prior to entering MODE 4 on the first plant start-up following Refuel Outage 9.

b) SR 3.3.11.2, Function 2, shall be successfully demonstrated no later than 31 days following the implementation date of the ITS.

c) SR 3.3.17.1, Functions 1, 2, 6, 10, 14, & 17 shall be successfully demonstrated no later than 31 days following the implementation date of the ITS.

d) SR 3.3.17.2, Function 10 shall be successfully demonstrated prior to entering MODE 3 on the first plant start-up following Refuel Outage 9.

e) SR 3.6.1.2 shall be successfully demonstrated prior to entering MODE 2 on the first plant start-up following Refuel Outage 9.

f) SR 3.7.12.2 shall be successfully demonstrated prior to entering MODE 2 on the first plant start-up following Refuel Outage 9.

g) SR 3.8.1.10 shall be successfully demonstrated prior to entering MODE 2 on the first plant start-up following Refuel Outage 9.

h) SR 3.8.3.3 shall be successfully demonstrated prior to entering MODE 4 on the first plant start-up following Refuel Outage 9.

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Required ACTION and associated Completion Time not met. OR For DD-EFW Pump fuel oil, lube oil or starting air subsystems not within limits for reasons other than Conditions A, B, C, D or E.	F.1 Declare DD-EFW Pump inoperable.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.19.1	Verify DD-EFW Pump fuel oil storage tank contains $\geq$ 9,580 gal of fuel.	31 days
SR 3.7.19.2	Verify DD-EFW Pump stored lube oil inventory is $\geq$ 207 gal.	31 days
SR 3.7.19.3	Verify DD-EFW Pump fuel oil properties of new and stored fuel oil are tested in accordance with, and maintained within the limits of the Diesel Fuel Oil Testing program.	In accordance with the Diesel Fuel Oil Testing Program
SR 3.7.19.4	Verify DD-EFW Pump starting air receiver pressure is $\geq$ 177 psig.	31 days

3.7 PLANT SYSTEMS

3.7.19 Diesel Driven EFW (DD-EFW) Pump Fuel Oil, Lube Oil and Starting Air

LCO 3.7.19 The stored diesel fuel oil, lube oil, and starting air subsystems shall be within limits for the DD-EFW Pump.

APPLICABILITY: When the associated DD-EFW Pump is required to be OPERABLE.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. DD-EFW Pump fuel oil storage tank level < 9,580 gal and > 8,435 gal.	A.1 Restore fuel oil level to within limits.	48 hours
B. With stored DD-EFW Pump diesel lube oil inventory < 207 gal and > 178 gal.	B.1 Restore stored lube oil inventory to within limits.	48 hours
C. DD-EFW Pump with stored fuel oil total particulates not within limits.	C.1 Restore fuel oil total particulates to within limits.	7 days
D. DD-EFW Pump with new fuel oil properties not within limits.	D.1 Restore stored fuel oil properties to within limits.	30 days
E. DD-EFW Pump with starting air receiver pressure < 177 psig and > 150 psig.	E.1 Restore starting air receiver pressure to within limits.	48 hours

(continued)

UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 240 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 letter dated February 25, 2011, as replaced in its entirely by letter dated January 19, 2012, Florida Power Corporation (FPC, the licensee) submitted an application to revise the Crystal River Unit 3 Nuclear Generating Plant (CR-3) Improved Technical Specification (ITS) 3.7.19, Condition A and ITS Surveillance Requirement (SR) 3.7.19.1, in order to increase the ITS minimum required stored diesel fuel for the diesel driven emergency feedwater (DD-EFW) pump (EFP-3) in the fuel oil storage tank (DFT-4).

The supplement dated January 19, 2012, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the Nuclear Regulatory Commission (NRC, or the Commission) staff's original proposed no significant hazards consideration determination as published in the Federal Register on June 14, 2011, 2011, (76 FR 34767).

2.0 REGULATORY ANALYSIS

Section 182a of the Atomic Energy Act requires applicants for nuclear power plant operating licenses to include technical specifications (TSs) as part of the license. These TSs are derived from the plant safety analyses.

The NRC regulatory requirements related to the contents of TSs are set forth in Title 10 of the *Code of Federal Regulations* (10 CFR), 50.36, "Technical specifications," which ensures that TSs specified limiting condition for operation is consistent with assumed values of the initial conditions in the licensee's safety analyses.

In general, there are two classes of changes to TSs: (1) changes needed to reflect contents of the design basis (TSs are derived from the design basis), and (2) voluntary changes to take advantage of the evolution in policy and guidance as to the required content and preferred format of TSs over time. This amendment deals with the first class of change from the design basis to increase the TSs minimum required stored diesel fuel oil for the diesel driven emergency feedwater pump.

Paragraph (c)(3), "Surveillance requirements," of 10 CFR 50.36 specifies that, "Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met."

The CR-3 Final Safety Analysis Report (FSAR), Section 1.4, Subsection 1.4.44, "Criterion 44 - Emergency Core Cooling Systems Capability (Category A)," identifies the emergency feedwater system and states the following:

> At least two emergency core cooling systems, preferably of different design principles, each with a capability for accomplishing abundant emergency core cooling, shall be provided. Each emergency core cooling system and the core shall be designed to prevent fuel and clad damage that would interfere with the emergency core cooling function and to limit the clad metal-water reaction to negligible amounts for all sizes of breaks in the reactor coolant pressure boundary, including the double-ended rupture of the largest pipe. The performance of each emergency core cooling system shall be evaluated conservatively in each area of uncertainty. The systems shall not share active components and shall not share other features or components unless it can be demonstrated that: (a) the capability of the shared feature or component to perform its required function can be readily ascertained during reactor operation, (b) failure of the shared feature or component does not initiate a loss-of-coolant accident, and (c) capability of the shared feature or component to perform its required function is not impaired by the effects of a loss-of-coolant accident and is not lost during the entire period this function is required following the accident.

The licensee includes information for CR-3 calculation M98-0118, "CR-3 Diesel Driven EFP-3 Fuel Tank Size and Shape Calculation," used to calculate the fuel oil storage tank (DFT-4) size for EFP-3. This includes determining the fuel volume needed for 7 days of continuous engine operation. The calculation uses 7 days of engine operation for the 10 CFR 50, Appendix K, decay heat removal assumptions.

Section 10.5 of the licensee's FSAR entitled "Emergency Feedwater System," Subsection 10.5.1, "Design Bases," states the following in part:

> The Emergency Feedwater (EF) System consists of two full capacity independent systems including two pumps and associated valves and piping. The EF System piping is designed to ANSI B31.1 ES Seismic Class I and in accordance with General Design Criteria 2, 4, 5, 19, 44, 45, and 46. The system is required to automatically supply [storage] sufficient emergency feedwater to one or both once through steam generators (OTSG) to provide decay heat removal and maintain the Reactor Coolant (RC) system flow in the transition from forced to natural circulation when the Reactor Coolant Pumps are tripped.

Consistent with the other emergency core cooling system components, the licensee has established a diesel driven EFW pump design function of operating continuously for 7 days.

3.0 TECHNICAL EVALUATION

3.1 Background

The Emergency Feedwater (EFW) System includes one diesel driven emergency feedwater (DD-EFW) pump (EFP-3) and one steam turbine driven EFW pump (EFP-2). EFP-3 was installed to functionally replace the existing motor driven emergency feedwater pump (EFP-1), and EFP-1 is maintained for defense in depth. These pumps operate when the normal feedwater pumps supplying water to the secondary side of the steam generators are unavailable.

3.2 Proposed Change

The proposed change would revise the Crystal River Unit 3 (CR-3) Improved Technical Specifications (ITS) 3.7.19, Condition A and the associated Surveillance Requirement (SR) 3.7.19.1:

TS 3.7.19, Condition A

The volume in the Diesel Driven Emergency Feedwater (DD-EFW) pump (EFP-3) fuel oil storage tank (DFT-4) will be increased by 100 gallons (gal). This will change the value for the required Condition A action to restore fuel oil levels as follows:

Current: DD-EFW Pump fuel oil supply tank level < 9,480 gal and > 8,335 gal in the storage tank

Proposed: DD-EFW Pump fuel oil storage tank level < 9,580 gal and > 8,435 gal

SR 3.7.19.1

The minimum volume of the tank level will be increased by 100 gallons to match the change of the higher level for ITS 3.7.19, Condition A, as shown above. This will change the SR values for the required surveillance of fuel oil levels as follows:

Current: Verify DD-EFW Pump fuel oil storage tank contains ≥ 9,480 gal of fuel

Proposed: Verify DD-EFW Pump fuel oil storage tank contains ≥ 9,580 gal of fuel

3.3 Technical Evaluation

During an NRC component design inspection (NRC Inspection Report 05000302/2010007, dated September 28, 2010) (ADAMS Accession No. ML102730597), the NRC inspectors questioned the assumptions for the vortex allowance at the bottom of the tank that were used in Revision 2 of the CR-3 calculation M98-0118, "CR-3 Diesel Driven EFP-3 Fuel Tank Size and Shape Calculation." The licensee performed an engineering review and determined that due to the effects of vortexing in the tank, the condition used in the calculation was nonconservative.

The licensee stated, in its submittal, that the Calculation M98-0118, Revision 2, used for the current technical specification information, assumed that the unusable volume at the bottom of the tank was 5 percent which equated to 690 gallons. This assumption did not consider the minimum required height to prevent vortex ingestion at the DFT-4 diesel supply line connection. When this is considered, the unusable volume at the bottom of the tank is approximately 793 gallons; about 103 gallons greater than that assumed in M98-0118, Revision 2. The licensee stated that Revision 3 of the calculation M98-0118 has addressed the non-conservative assumptions for the unusable volume at the bottom of the tank.

The following table, which is provided in Section 3.0 of the LAR, summarizes the differences between results in the Revision 2 and Revision 3 of the calculation M98-0118.

Document	7-day value (gallons)	6-day value (gallons)
M98-0118, Revision 2	9,440	8,280
ITS 3.7.19, Condition A (current)	9,480	8,335
M98-0118, Revision 3	9,553	8,393
ITS 3.7.19, Condition A (proposed)	9,580	8,435

The NRC Administrative Letter 98-10, "Dispositioning of Technical Specifications That Are Insufficient to Assure Plant Safety," states that the discovery of an inadequate technical specification value is considered a degraded condition and indicates that administrative controls are an acceptable short term corrective action, along with a license amendment request submittal, to resolve the condition in a timely manner. The licensee states that administrative controls have been established at CR-3 for the DFT-4 fuel oil storage tank level. In addition, plant procedures have been revised to include a conservative value for fuel oil volume in DFT-4. Further the licensee committed, as captured in Section 4 of this safety evaluation, that the fuel oil storage tank level will be maintained until the amendment is implemented.

The NRC staff has reviewed the licensee's submittal, including the calculation M98-0118, Revision 3 results. The licensee proposed to maintain the fuel oil in the storage tank by an additional 100 gallons. The decrease in calculational margin level from 40 gallons to 27 gallons has no adverse impact because the calculated value with vortex consideration is more accurate. The licensee's commitment to maintain the fuel tank level administratively ensures short term operability. Therefore, the NRC staff finds the changes to the TS 3.7.19, Condition A and SR 3.7.19.1 are acceptable.

4.0 REGULATORY COMMITMENT

In Attachment E of its letter dated January 19, 2012, the licensee has committed to the following with regards to its proposed changes to the CR-3 TSs and SRs:

Commitment	Due Date
Proposed Technical Specification limits for the DFT-4 fuel oil storage tank level will be administratively maintained until the license amendment is implemented.	Procedures are in place and will be maintained until the license amendment is implemented.

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, Nuclear Regulatory Commission, the State of Florida does not desire notification of issuance of license amendments (ADAMS Accession No. ML032470912).

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 to the 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 (June 14, 2011; 76 FR 34767). 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: Ogbonna Hopkins

Date: February 24, 2012

February 24, 2012

Mr. Jon A. Franke, Vice President
Crystal River Nuclear Plant (NA2C)
ATTN: Supervisor, Licensing & Regulatory Programs
15760 W. Power Line Street
Crystal River, Florida 34428-6708

SUBJECT: CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING – ISSUANCE OF AMENDMENT REGARDING IMPROVED TECHNICAL SPECIFICATIONS 3.7.19 DIESEL DRIVEN EMERGENCY FEEDWATER PUMP FUEL OIL, LUBE OIL AND STARTING AIR (TAC NO. ME5747)

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Sincerely,

/RA/

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosures:
1. Amendment No. 240 to DPR-72
2. Safety Evaluation

cc w/enclosures: Distribution via ListServ

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