

January 24, 1983

DMB 0/6

**DISTRIBUTION:** Gray file +4  
 Docket File DEisenhut  
 NRC PDR RIngram  
 L PDR MFairtile  
 ORB#4 Rdg OELD  
 Docket No. 50-302 AEOD  
 IE-Harmon (2)  
 SECY w/NRC 102  
 ASLAB

EJordan  
 ACRS-10  
 HOrnstein  
 EBlackwood  
 TBarnhart-4  
 LSchneider  
 RDiggs  
 CMiles  
 DBrinkman  
 T. DOWNING  
 M. WIGDOR

Mr. J. A. Hancock  
 Vice President, Nuclear Operations  
 Florida Power Corporation  
 ATTN: Manager, Nuclear Licensing  
 & Fuel Management  
 P. O. Box 14042; M.A.C. H-2  
 St. Petersburg, Florida 33733

Dear Mr. Hancock:

The Commission has issued the enclosed Amendment No. 61 to Facility Operating License No. DPR-72 for the Crystal River Unit No. 3 Nuclear Generating Plant (CR-3). The amendment consists of changes to the Technical Specifications (TSS) in response to your application dated January 14, 1983, as supplemented January 20, 1983.

This amendment provides for the deferment of certain monthly channel functional tests of engineered safeguards components until Crystal River Unit No. 3 is shutdown for Reload IV.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

John F. Stolz, Chief  
 Operating Reactors Branch #4  
 Division of Licensing

Enclosures:

1. Amendment No. 61
2. Safety Evaluation
3. Notice

cc w/enclosures:  
 See next pg.

8302020150 830124  
 PDR ADOCK 05000302  
 P PDR

OFFICE	ORB#4:DL	ORB#4:DL	C-ORB#4:DL	AD-OR:DL	OELD		
SURNAME	RIngram	MFairtile/cb	JStolz	GLatras	M. KARRAN		
DATE	1/21/83	1/21/83	1/21/83	1/24/83	1/24/83		

Crystal River Unit No. 3  
Florida Power Corporation

50-302

cc w/enclosure(s):  
Mr. S. A. Brandimore  
Florida Power Corporation  
Vice President and General Counsel  
P. O. Box 14042  
St. Petersburg, Florida 33733

Mr. Wilbur Langely, Chairman  
Board of County Commissioners  
Citrus County  
Iverness, Florida 36250

Regional Radiation Representative  
EPA Region IV  
345 Courtland Street, N.E.  
Atlanta, Georgia 30308

Mr. Robert B. Borsum  
Babcock & Wilcox  
Nuclear Power Generation Division  
Suite 220, 7910 Woodmont Avenue  
Bethesda, Maryland 20814

Mr. Tom Stetka, Resident Inspector  
U.S. Nuclear Regulatory Commission  
Route #3, Box 717  
Crystal River, Florida 32629

Mr. T. C. Lutkehaus  
Nuclear Plant Manager  
Florida Power Corporation  
P. O. Box 219  
Crystal River, Florida 32629

Bureau of Intergovernmental Relations  
660 Apalachee Parkway  
Tallahassee, Florida 32304

Administrator  
Department of Environmental Regulation  
Power Plant Siting Section  
State of Florida  
2600 Blair Stone Road  
Tallahassee, Florida 32301

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

Mr. James P. O'Reilly, Regional Administrator  
U. S. Nuclear Regulatory Commission, Region II  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303



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

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  
SEBRING UTILITIES COMMISSION  
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. 61  
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 January 14, 1983, as supplemented January 20, 1983, 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.

B302020156 B30124  
PDR ADOCK 05000302  
P PDR

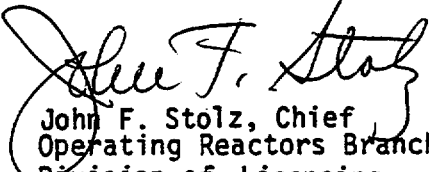
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-72 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 61, are hereby incorporated in the license. Florida Power Corporation shall operate the facility in accordance with the Technical Specifications.

3. Within 90 days after the effective date of this amendment, or such later time as the Commission may specify, Florida Power Corporation shall satisfy any applicable requirement of P.L. 97-425 related to pursuing an agreement with the Secretary of Energy for the disposal of high-level radioactive waste and spent nuclear fuel.
4. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: January 24, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 61

FACILITY OPERATING LICENSE NO. DPR-72

DOCKET NO. 50-302

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Pages

3/4 3-18

3/4 3-19

3/4 3-20

TABLE 3.3-5 (Cont'd)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS*</u>
7. <u>Containment Radioactivity-High</u>	
a. Reactor Building Purge Isolation	15 *
8. <u>Main Feedwater Pump Turbines A and B Control Oil Low</u>	
a. Emergency Feedwater Actuation	Not Applicable
9. <u>OTSG A and B Level Low-Low</u>	
a. Emergency Feedwater Actuation	Not Applicable

\*Diesel Generator starting and sequence loading delays included.  
Response time limit includes movement of valves and attainment of  
pump or blower discharge pressure.

TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
<b>1. SAFETY INJECTION</b>				
<b>a. High Pressure Injection</b>				
1. Manual Initiation	N/A	N/A	M(1)	1, 2, 3, 4 *
2. Reactor Bldg. Pressure High	S	R	M(2)	1, 2, 3
3. RCS Pressure Low	S	R	M	1, 2, 3
4. RCS Pressure Low-Low	S	R	M	1, 2, 3
5. Automatic Actuation Logic	N/A	N/A	M(3)	1, 2, 3, 4 *
<b>b. Low Pressure Injection</b>				
1. Manual Initiation	N/A	N/A	M(1)	1, 2, 3, 4 *
2. Reactor Bldg. Pressure High	S	R	M(2)	1, 2, 3
3. RCS Pressure Low-Low	S	R	M	1, 2, 3
4. Automatic Actuation Logic	N/A	N/A	M(3)	1, 2, 3, 4 *
<b>2. REACTOR BLDG. COOLING</b>				
<b>a. Manual Initiation</b>	N/A	N/A	M(1)	1, 2, 3, 4 *
<b>b. Reactor Bldg. Pressure High</b>	S	R	M(2)	1, 2, 3
<b>c. Automatic Actuation Logic</b>	N/A	N/A	M(3)	1, 2, 3, 4 *

\* The CHANNEL FUNCTIONAL TEST requirements are waived during the specified MODES IN WHICH SURVEILLANCE REQUIRED until refueling IV.

TABLE 4.3-2 (Cont'd)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEMS INSTRUMENTATION SURVEILLANCE REQUIREMENTS

CRYSTAL RIVER - UNIT 3

3/4 3-19

Amendment No. ~~17~~ 38,61

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
3. REACTOR BLDG. SPRAY				
a. Reactor Bldg. Pressure High-High coincident with HPI Signal	S	R	M(4)	1, 2, 3
b. Automatic Actuation Logic	N/A	N/A	M(3)	1, 2, 3 *
4. OTHER SAFETY SYSTEMS				
a. Reactor Bldg. Purge Exhaust Duct Isolation on High Radioactivity				
1. Gaseous	S	Q	M	All Modes
b. Steam Line Rupture Matrix				
1. Low SG Pressure	N/A	R	N/A	1, 2, 3
2. Automatic Actuation Logic	N/A	N/A	M(3)	1, 2, 3 *
c. Emergency Feedwater				
1. Main Feedwater Pump Turbines A and B Control Oil Low	S	R	N/A	1, 2, 3
2. OTSG A and B Level Low-Low	S	R	N/A	1, 2, 3, 4

\* The CHANNEL FUNCTIONAL TEST requirements are waived during the specified MODES IN WHICH SURVEILLANCE REQUIRED until refueling IV.



CRYSTAL RIVER - UNIT 3

3/4 3-20

Amendment No. 39, 61

TABLE 4.3-2 (Cont'd)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
5. REACTOR BLDG. ISOLATION				
a. Manual Initiation	N/A	N/A	M(1)	1, 2, 3, 4 *
b. Reactor Bldg. Pressure High	S	R	M(2)	1, 2, 3
c. Automatic Actuation Logic	N/A	N/A	M(3)	1, 2, 3, 4 *
d. Manual Initiation (HPI Isolation)	N/A	N/A	M(1)	1, 2, 3, 4 *
e. RCS Pressure Low (HPI Isolation)	S	R	M	1, 2, 3
f. Automatic Actuation Logic (HPI Isolation)	N/A	N/A	M(3)	1, 2, 3, 4 *

\* The CHANNEL FUNCTIONAL TEST requirements are waived during the specified MODES IN WHICH SURVEILLANCE REQUIRED until refueling IV.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NO. DPR-72

FLORIDA POWER CORPORATION, ET AL

CRYSTAL RIVER UNIT NO. 3 NUCLEAR GENERATING PLANT

DOCKET NO. 50-302

Introduction

By letter dated January 14, 1983, as supplemented January 20, 1983, Florida Power Corporation (FPC or the licensee) proposed a change to the Crystal River Unit 3 (CR-3) Technical Specifications (TSs). This TS change provides for the deferment of certain monthly channel functional tests of engineered safeguards components until CR-3 is shutdown for Reload IV.

Background

By Special Report dated December 23, 1982, FPC notified the NRC of failure to meet the plant Technical Specification requirements for monthly testing of the Engineered Safeguard Features (ESF) system. As stated in the FSAR, the plant was designed to comply with IEEE Standard 279-1971 and Regulatory Guide 1.22 so that the channel functional tests could be performed at power.

As operating experience was gained, the licensee noted that operating certain ESF equipment at full power was inducing transients, caused at least two shutdowns and introduced several potential adverse conditions. As a result, the licensee ceased performing monthly functional tests for most manual initiation and automatic actuation logic testing of the ESF systems. Included with the Technical Specification Change Request FPC provided a proposed program to arrive at a permanent solution to provide an adequate test program. The program includes development of appropriate surveillance tests before restart from the next refueling outage to allow safe and reliable testing during the next fuel cycle. Also, a detailed review of ESFAS testability would be conducted to determine what actions are necessary to allow optimum testing of the ESF system on a schedule to support performance of any needed plant modification in the subsequent refueling outage.

In support of the request, FPC staff met with NRC staff in Bethesda on January 17, 1983 to discuss the design of the CR-3 ESF system and the proposed changes.

Evaluation

The licensee has requested a change to the CR-3 Technical Specifications so that the channel functional test for the manual initiation of the Engineered Safeguards System will be performed on a refueling outage frequency in lieu of monthly during power operation. Additionally, the licensee requested that automatic actuation logic testing that actuates equipment be deferred until the next refueling outage. In support of this request, FPC has provided justification for not operating EFS actuated equipment during the monthly tests.

The design of the CR-3 ESF system is such that testing of automatic actuation logic will actuate certain test groups. There is no inherent capability to block the test signal to the groups of actuated equipment.

The design of the CR-3 ESF consists of redundant sensor channels which initiate protective actions on a trip of two of the three redundant channels. A channel trip results in deenergizing two (or more) output relays associated with each channel. Contacts from three redundant channel output relays are configured in a matrix to actuate equipment for one train for each ESF system. A separate output relay from each channel is used to operate equipment in the redundant train for each ESF system. Each sensor channel is tested monthly in accordance with plant Technical Specification. These tests confirm the operability of the channel including its output relays, which are confirmed by a light, actuated by one of the relay's contacts.

The testing that confirms the continuity of the matrix logic contacts includes features that permit deenergizing channel output relays associated with one train of an ESF system. The automatic actuation logic testing performed in this manner includes only a limited number of ESF components per test so that full ESF system actuation does not occur. However, since the matrix of sensor channel contacts are used directly to actuate individual components, the only verification for operability of the logic is the change in state of each component. This testing of the automatic actuation logic requires that each component be operated three times to include each two out of three combination. When manual initiation testing is included, all components are again operated through a complete cycle. FPC has not conducted the monthly testing of manual initiation and automatic actuation logic circuits of the ESF systems and has requested that these requirements be waived until the next refueling outage, presently scheduled for March, 1983.

Regulatory Guide 1.22, "Periodic Testing of Protection System Actuation Functions" provides guidance where testing results in operation of equipment associated with a protective function that may damage plant equipment or disrupt reactor operation. In such cases, the staff has allowed exceptions to system testing when there are compelling reasons for not testing the actuated equipment and when the probability that the protection system will fail is acceptably low. In its evaluation of the proposed change, FPC provided an evaluation of potential adverse consequences that testing of actuated components in various groups could have. Based on its review, the NRC staff concludes that a sufficient basis has been provided for not testing the actuated equipment group in the interim period until the next refueling outage.

The testing for which relief has been requested involves the protection system logic and actuated components. With regard to the actuation logic, it is concluded that the most probable failure mode of the logic matrix relays would be revealed during the sensor channel testing which is conducted monthly. With regard to the actuated components, FPC has noted that most of those components are tested individually each month under its inservice inspection program for pump and valves. All but two ESF actuated components have been tested to demonstrate their operability as recently as December 17, 1982 or January 5, 1983. Further, the current ASME Code for

inservice inspection only requires quarterly testing of components. In that the time to the next refueling outage will not deviate from these requirements, the staff concludes that the probability of failures is acceptably low and that the monthly inservice inspection program will verify the operability of the least reliable components of the ESFAS.

With regard to the specific form in which the Technical Specifications have been modified, the licensee has concurred with the changes incorporated. We conclude the proposed changes are acceptable.

#### Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

#### Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: January 24, 1983

The following NRC personnel have contributed to this Safety Evaluation:

M. Fairtile, M. Wigdor, T. Dunning.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-302FLORIDA POWER CORPORATION, ET ALNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

!

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 61 to Facility Operating License No. DPR-72, issued to the 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, Sebring Utilities Commission, Seminole Electric Cooperative, Inc., and the City of Tallahassee (the licensees) which revised the Technical Specifications (TSs) for operation of the Crystal River Unit No. 3 Nuclear Generating Plant (the facility) located in Citrus County, Florida. The amendment is effective as of the date of issuance.

This amendment provides for the deferment of certain monthly channel functional tests of engineered safeguards components until Crystal River Unit No. 3 is shutdown for Reload IV.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior

8302020162 830124  
PDR ADOCK 05000302  
P PDR

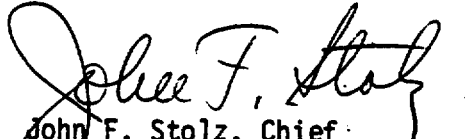
public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated January 14, 1983, as supplemented January 20, 1983, (2) Amendment No. 61 to License No. DPR-72, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C., and at the Crystal River Public Library, 668 N. W. First Avenue, Crystal River, Florida. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 24th day of January 1983.

FOR THE NUCLEAR REGULATORY COMMISSION

  
John F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing