

JULY 23 1979

Docket No. 50-302

Mr. W. P. Stewart  
Director, Power Production  
Florida Power Corporation  
P. O. Box 114042, Mail Stop C-4  
St. Petersburg, Florida 33733

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Dear Mr. Stewart:

The Commission has issued the enclosed Amendment No. 22 to Facility Operating License No. DPR-72 for Crystal River Unit No. 3 Nuclear Generating Plant. This amendment consists of changes to the Technical Specifications in response to a portion of your application dated July 13, 1979.

This amendment modifies the Technical Specifications to upgrade flow rate test requirements associated with emergency core cooling system modifications.

Changes to your proposal, necessary to meet our requirements, have been discussed with and agreed to by your staff.

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

Sincerely,

Original signed by

Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Enclosures:

1. Amendment No. 22 to DPR-72
2. Safety Evaluation
3. Notice

cc w/enclosures:  
See next page

REGULATORY DOCKET FILE COPY

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OFFICE	ORB#4: DOR	ORB#4: DOR	C-ORB#4: DOR	AD-ORB: DOR	OELD
SURNAME	SShepard/	CNe1son/cb	RReid	WGammill	S.H.Lewis
DATE	7/19/79	7/19/79	7/19/79	7/20/79	7/20/79



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

July 23, 1979

Docket No. 50-302

Mr. W. P. Stewart  
Director, Power Production  
Florida Power Corporation  
P. O. Box 14042, Mail Stop C-4  
St. Petersburg, Florida 33733

Dear Mr. Stewart:

The Commission has issued the enclosed Amendment No. 22 to Facility Operating License No. DPR-72 for Crystal River Unit No. 3 Nuclear Generating Plant. This amendment consists of changes to the Technical Specifications in response to a portion of your application dated July 13, 1979.

This amendment modifies the Technical Specifications to upgrade flow rate test requirements associated with emergency core cooling system modifications.

Changes to your proposal, necessary to meet our requirements, have been discussed with and agreed to by your staff.

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

Sincerely,

A handwritten signature in cursive script that reads "Robert W. Reid".

Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Enclosures:

1. Amendment No. 22 to DPR-72
2. Safety Evaluation
3. Notice

cc w/enclosures:  
See next page

Florida Power Corporation

cc w/enclosure(s):

Mr. S. A. Brandimore  
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

U. S. Environmental Protection Agency  
Region IV Office  
ATTN: EIS COORDINATOR  
345 Courtland Street, N.E.  
Atlanta, Georgia 30308

Director, Technical Assessment  
Division  
Office of Radiation Programs  
(AW-459)  
U. S. Environmental Protection Agency  
Crystal Mall #2  
Arlington, Virginia 20460

Crystal River Public Library  
Crystal River, Florida 32629

Mr. J. Shreve  
The Public Counsel  
Room 4 Holland Bldg.  
Tallahassee, Florida 32304

Administrator  
Department of Environmental Regulation  
Power Plant Siting Section  
State of Florida  
Montgomery Building  
2562 Executive Center Circle, E.  
Tallahassee, Florida 32301

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

Mr. Robert B. Borsum  
Babcock & Wilcox  
Nuclear Power Generation Division  
Suite 420, 7735 Old Georgetown Road  
Bethesda, Maryland 20014

cc w/enclosures & incoming  
dtd: 7/13/79  
Bureau of Intergovernmental  
Relations  
660 Apalachee Parkway  
Tallahassee, Florida 32304



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

FLORIDA POWER CORPORATION  
CITY OF ALACHUA  
CITY OF BUSHNELL  
CITY OF GAINESVILLE  
CITY OF KISSIMEE  
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. 22  
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 July 13, 1979, 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.

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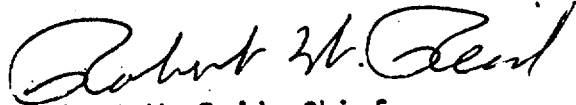
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-72 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 22, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 23, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 22

FACILITY OPERATING LICENSE NO. DPR-72

DOCKET NO. 50-302

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

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# EMERGENCY CORE COOLING SYSTEMS

## SURVEILLANCE REQUIREMENTS (Continued)

2. Verifying the correct position of each mechanical position stop for each of the stop check valves listed in Specification 4.5.2.c.
  3. Verifying that the flow switches for the throttle valves listed in Specification 4.5.2.d operate properly.
  4. A visual inspection of the containment emergency sump which verifies that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.
  5. Verifying a total leak rate  $\leq$  6 gallons per hour for the LPI system at:
    - a) Normal operating pressure or a hydrostatic test pressure of  $>$  150 psig for those parts of the system downstream of the pump suction isolation valve, and
    - b)  $\geq$  55 psig for the piping from the containment emergency sump isolation valve to the pump suction isolation valve.
- f. At least once per 18 months, during shutdown, by
1. Verifying that each automatic valve in the flow path actuates to its correct position on a high pressure or low pressure safety injection test signal, as appropriate.
  2. Verifying that each HPI and LPI pump test starts automatically upon receipt of a high pressure or low pressure safety injection test signal, as appropriate.
- g. Following completion of HPI or LPI system modifications that could have altered system flow characteristics,  $\ddagger$  by performance of a flow balance test during shutdown to confirm the following injection flow rates into the Reactor Coolant System:

### HPI System - Single Pump

Single pump flow rate  $\geq$  500 gpm  
at 600 psig

While injecting through 4 Injection Legs,  
the flow rate for all combinations  
of 3 Injection Legs  $\geq$  350 gpm at 600  
psig

### LPI System - Single Pump

1. Injection Leg A - 2800 to  
3100 gpm
2. Injection Leg B - 2800 to  
3100 gpm

$\ddagger$  Flow balance tests performed prior to complete installation of modifications are valid if performed with the system change that could alter flow characteristics in effect.

## EMERGENCY CORE COOLING SYSTEMS

ECCS SUBSYSTEMS -  $T_{avg} < 280^{\circ}\text{F}$

### LIMITING CONDITION FOR OPERATION

3.5.3 As a minimum, one ECCS subsystem comprised of the following shall be OPERABLE:

- a. One OPERABLE high pressure injection (HPI) pump,
- b. One OPERABLE low pressure injection (LPI) pump,
- c. One OPERABLE decay heat cooler, and
- d. An OPERABLE flow path capable of taking suction from the borated water storage tank (BWST) and transferring suction to the containment emergency sump.

APPLICABILITY: MODE 4.

#### ACTION:

- a. With no ECCS subsystem OPERABLE because of the inoperability of either the HPI pump or the flow path from the borated water storage tank, restore at least one ECCS subsystem to OPERABLE status within one hour or be in COLD SHUTDOWN within the next 20 hours.
- b. With no ECCS subsystem OPERABLE because of the inoperability of either the decay heat cooler or LPI pump, restore at least one ECCS subsystem to OPERABLE status or maintain the Reactor Coolant System  $T_{avg}$  less than  $280^{\circ}\text{F}$  by use of alternate heat removal methods.
- c. In the event the ECCS is actuated and injects water into the reactor coolant system, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date.

### SURVEILLANCE REQUIREMENTS

4.5.3 The ECCS subsystems shall be demonstrated OPERABLE per the applicable Surveillance Requirements of 4.5.2.





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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 22 TO FACILITY OPERATING

LICENSE NO. DPR-72

FLORIDA POWER CORPORATION, ET AL

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT

DOCKET NO. 50-302

Introduction

Amendment No. 17 to the Crystal River Unit 3 Operating License added the requirement to check emergency core cooling system (ECCS) injection flow rates following modifications which might alter these flow rates. Minimum acceptable flow rates were specified.

As a result of a high pressure injection (HPI) system modification approved by NRC letter dated May 29, 1979, Florida Power Corporation (licensee) has proposed to upgrade the flow rate test requirements to apply to the modified system and to allow credit for flow rate tests performed in the modified system configuration but prior to actual modification completion. We have evaluated the proposed change.

Evaluation

Currently Technical Specification (TS) 4.5.2g requires that each of the four HPI flow paths be demonstrated to have a flow rate of at least 250 gpm. This assumes one HPI pump (500 gpm) injecting through two lines in both HPI trains. This testing demonstrates both a minimum total flow (500 gpm per pump) and a generally equal distribution.

The approved modification to the HPI system could alter flow characteristics because the pump discharge cross connect valves are open instead of closed. This modification was necessary to insure at least 70% flow from one HPI pump was available for core cooling in the event of the most limiting small break and the worst single failure. The licensee's analysis supporting the 350 gpm (70% flow from one HPI pump) minimum flow requirement was found acceptable during our review of the proposed modification.

Since the most limiting flow distribution requirement now is that one HPI pump will supply 350 gpm through any combination of three injection lines (while injecting through four lines), the licensee has proposed to change the test requirement accordingly. In addition, the requirement that each HPI pump supply 500 gpm will be retained.

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We have determined that the proposed change is in accordance with the currently approved ECCS flow rate requirements and is therefore acceptable.

The licensee also proposed to change the current requirement that the flow rate tests be performed following completion of the modification. The proposed change would allow credit for testing done with the HPI system in the modified configuration (in this case with the pump discharge cross-connects open) but prior to completing the entire system modification (e.g., electric circuit changes). Since this testing meets the intent of the current requirement to demonstrate adequate flow rates in the modified system configuration, we find the proposed change 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 accidents previously considered and does not involve a significant decrease in a safety margin, 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: July 23, 1979

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-302FLORIDA POWER CORPORATIONCITY OF ALACHUACITY OF BUSHNELLCITY OF GAINESVILLECITY OF KISSIMMEECITY OF LEESBURGCITY OF NEW SMYRNA BEACH AND UTILITIES COMMISSION, CITY OF NEW SMYRNA BEACHCITY OF OCALAORLANDO UTILITIES COMMISSION AND CITY OF ORLANDOSEBRING UTILITIES COMMISSIONSEMINOLE ELECTRIC COOPERATIVE, INC.CITY OF TALLAHASSEENOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 22 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 for operation for 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 modifies the Technical Specifications to upgrade flow rate test requirements associated with emergency core cooling system modifications.

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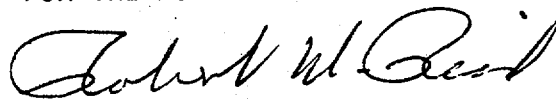
The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior 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 July 13, 1979, (2) Amendment No. 22 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, 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 Operating Reactors.

Dated at Bethesda, Maryland, this 23rd day of July 1979.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors