October 17, 1989

Docket No. 50-302

DISTRIBUTION
See attached sheet

Mr. W. S. Wilgus
Vice President, Nuclear Operations
Florida Power Corporation
ATTN: Manager, Nuclear Licensing
P. O. Box 219
Crystal River, Florida 32629

Dear Mr. Wilgus:

SUBJECT: CRYSTAL RIVER UNIT 3 - ISSUANCE OF AMENDMENT RE: CORE EXIT THERMOCOUPLES AND REACTOR COOLANT INVENTORY TRACKING SYSTEM (TAC NO. 74171)

The Commission has issued the enclosed Amendment No. 124 to Facility Operating License No. DPR-72 for the Crystal River Unit No. 3 Nuclear Generating Plant (CR-3). This amendment consists of changes to the Technical Specifications (TS) in response to your application dated July 26, 1989.

This amendment adds operability, action and surveillance requirements for core exit thermocouples and the Reactor Coolant Inventory Tracking System to the TS. The requirement for monthly channel checks of the Reactor Coolant Inventory Tracking System that was inadvertently included in your submittal has been deleted. This action was discussed with and agreed to by members of your staff.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

for
Harley Silver, Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 124 to DPR-72
2. Safety Evaluation

cc w/enclosures:
See next page

CP-1

*SEE PREVIOUS CONCURRENCE

MR for				
LA:PDII-2	PE:PDII-2	PM:PDII-2	D:PDII-2	OGC
*DMiller	*GWunder	*HSilver:jd	*HBerkow	*RBachmann
09/15/89	09/18/89	10/02/89	10/13/89	10/06/89

DF01
1/1

Mr. W. S. Wilgus
Florida Power Corporation

Crystal River Unit No. 3 Nuclear
Generating Plant

cc:
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Clearinghouse
Office of Planning and Budget
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DATED: October 17, 1989

AMENDMENT NO. 124 TO FACILITY OPERATING LICENSE NO. DPR-72-CRYSTAL RIVER UNIT 3

Docket File
NRC & Local PDRs
PDII-2 Reading
S. Varga, 14/E/4
G. Lainas, 14/H/3
H. Berkow
D. Miller
G. Wunder
H. Silver
OGC-WF
D. Hagan, 3302 MNBB
E. Jordan, 3302 MNBB
B. Grimes, 9/A/2
T. Meek(4), P1-137
Wanda Jones, P-130A
J. Calvo, 11/F/23
J. Miller, 11/F/23
ACRS (10)
GPA/PA
OC/LFMB
M. Sinkule, R-II

cc: Plant Service list

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. 124
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 26, 1989, 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. 124 , 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 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 17, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 124

FACILITY OPERATING LICENSE NO. DPR-72

DOCKET NO. 50-302

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

Remove	Insert
3/4 3-37	3/4 3-37
3/4 3-38	3/4 3-38
3/4 3-39	3/4 3-39

INSTRUMENTATION

POST-ACCIDENT INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.6 The post-accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE with readouts on all channels in the control room. Recorders on instruments 1 through 10 shall be OPERABLE.

APPLICABILITY: MODES 1,2, and 3.

ACTION:

a. With the number of OPERABLE post-accident monitoring channels less than required by Table 3.3-10 (except for Reactor Vessel Level Instrumentation, items 21 and 22), either restore the inoperable channel to OPERABLE status within 30 days, or be in HOT SHUTDOWN within the next 12 hours,

b. With the number of OPERABLE channels of Reactor Vessel Hot Leg Level or Reactor Vessel Head Level 1 less than required by Table 3.3-10, either restore the inoperable channel to OPERABLE status within 7 days or submit a report to the Commission within the next 30 days outlining the cause of the inoperability and the plans and schedule for restoring the channel to OPERABLE status.

c. With the number of OPERABLE channels of Reactor Vessel Hot Leg Level or Reactor Vessel Head Level 2 less than required by Table 3.3-10, either restore at least 1 channel to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours,

d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.6 Each post-accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-7.

TABLE 3.3-10

POST-ACCIDENT MONITORING INSTRUMENTATION

	INSTRUMENT	MEASUREMENT RANGE	MINIMUM CHANNELS OPERABLE
1.	Power Range Nuclear Flux	0-125%	2
2.	Reactor Building Pressure	0-70 psia	2
		0-280 psig	2
3.	Source Range Nuclear Flux	10^{-1} to 10^{6} cps	2
4.	Reactor Coolant Outlet Temprature	520°F - 620°F	2 per loop
5.	Reactor Coolant Total Flow	0-160 x 10^{6} lb./hr.	1
6.	RC Loop Pressure	0-2500 psig	2
		0-600 psig	1
		1700-2500 psig	2
7.	Pressurizer level	0-320 inches	2
8.	Steam Generator Outlet Pressure	0-1200 psig	2/steam generator
9.	Steam Generator Operating Range Level	0-100%	2/steam generator
10.	Borated Water Storage Tank Level	0-50 feet	2
11.	Startup Feedwater Flow	0-1.5x10^{6} lb./hr.	2
12.	Reactor Coolant System Subcooling Margin Monitor	-658°F to +658°F	1
13.	PORV Position Indicator (Primary Detector)	N/A	1
14.	PORV Position Indicator (Backup Detector)	N/A	N/A
15.	PORV Block Valve Position Indicator	N/A	N/A
16.	Safety Valve Position Indicator (Primary Detector)	N/A	1/valve
17.	Safety Valve Position Indicator (Backup Detector)	N/A	N/A
18.	Emergency Feedwater Flow	0-850 gpm	2/steam generator
19.	Reactor Building Flood Level	0-10 feet	2
20.	Core Exit Thermocouples	0-2500°F	2/quadrant
21.	Reactor Vessel Hot Leg Level	0-100%	2
22.	Reactor Vessel Head Level	0-100%	2

TABLE 4.3-7

POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Power Range Nuclear Flux	M	Q*
2. Reactor Building Pressure	M	R
3. Source Range Nuclear Flux	M	R*
4. Reactor Coolant Outlet Temperature	M	R
5. Reactor Coolant Total Flow Rate	M	R
6. RC Loop Pressure	M	R
7. Pressurizer Level	M	R
8. Steam Generator Outlet Pressure	M	R
9. Steam Generator Level	M	R
10. Borated Water Storage Tank Level	M	R
11. Startup Feedwater Flow Rate	M	R
12. Reactor Coolant System Subcooling Margin Monitor	M	R
13. PORV Position Indicator (Primary Detector)	M	R
14. PORV Position Indicator (Backup Detector)	M	R
15. PORV Block Valve Position Indicator	M	R
16. Safety Valve Position Indicator (Primary Detector)	M	R
17. Safety Valve Position Indicator (Backup Detector)	M	R
18. Emergency Feedwater Flow	M	R
19. Reactor Building Flood Level	M	R
20. Core Exit Thermocouples	M	R
21. Reactor Vessel Hot Leg Level	NA	R
22. Reactor Vessel Head Level	NA	R

*Neutron detectors may be excluded from CHANNEL CALIBRATION

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 124 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 July 26, 1989, Florida Power Corporation (FPC or the licensee) requested an amendment to the Technical Specifications (TS) appended to Facility Operating License No. DPR-72 for the Crystal River Unit No. 3 Nuclear Generating Plant (CR-3). The proposed amendment would add operability, action, and surveillance requirements for core exit thermocouples and the Reactor Coolant Inventory Tracking System (RCITS) to the TS.

EVALUATION

Core exit thermocouples and the RCITS are post-accident monitoring instruments. Core exit thermocouples measure the temperature of reactor coolant as it leaves the core. This temperature is indicated over a range of 0 - 2500 degrees F. The RCITS uses a differential pressure measurement to help operators determine the level of reactor coolant within the reactor vessel. This level is indicated over a range of 0 - 100%. These instruments, when used in conjunction with other available indications, can help an operator determine the status of the Reactor Coolant System following a postulated loss of coolant accident. This information will allow the operator to take prompt corrective action to mitigate the effect of the accident.

Currently, the TS do not address operability or surveillance requirements for core exit thermocouples or the RCITS. The proposed amendment would add these systems to a list of instruments that must be operable. Should one channel of the core exit theromocouple instrumentation become inoperable, the proposed TS would require that it be restored within 30 days. If it were not restored within this period, the plant would have to be shut down. Should one channel of the RCITS become inoperable, the proposed TS would allow the licensee 30 days to submit a formal plan for restoring the inoperable channel. Should both channels become inoperable, the proposed TS would require the licensee to restore at least one channel within 7 days. If the licensee were unable to meet this requirement, the TS would again require the plant to be shut down.

The proposed amendment also addresses surveillance requirements for core exit thermocouples and the RCITS. Specifically, they require monthly channel checks for core exit thermocouples and channel calibration every 18 months for both core exit theromocouples and the RCITS.

Core exit thermocouples and the RCITS are currently installed at CR-3. The proposed TS will ensure that these instruments are available, and the proposed surveillance requirements will ensure that the instruments are operable if they are needed.

Core exit thermocouples and the RCITS are part of the post-accident monitoring system required by NUREG-0737. Generic Letter 83-37 proposed sample TS for this instrumentation. The licensee's proposed changes are consistent with the requirements of both NUREG-0737 and Generic Letter 83-37. The addition of these TS constitutes an additional restriction and in no way decreases a margin of safety. Therefore, based on our review, the changes proposed in this request are acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and adds surveillance requirements. We have 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this amendment.

CONCLUSION

We have 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, and (2) 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: October 17, 1989

Principal Contributor:
G. Wunder