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Docket Nos. 50-250
and 50-251

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Amdt. 77
to DPR-31

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Dr. Robert E. Uhrig, Vice President
Advanced Systems and Technology
Florida Power and Light Company
Post Office Box 529100
Miami, Florida 33152

Dear Dr. Uhrig:

The Commission has issued the enclosed Amendment No. 77 to Facility Operating License No. DPR-31 and Amendment No. 71 to Facility Operating License No. DPR-41 for the Turkey Point Plant Unit Nos. 3 and 4, respectively. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated January 13, 1982.

These amendments clarify the boron concentration required during the refueling operation by including the $\Delta k/k$ requirement of 10% in the Technical Specification as well as the boron concentration.

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

Sincerely,

ORIGINAL SIGNED

Marshall Grotenhuis, Project Manager
Operating Reactors Branch #1
Division of Licensing

Enclosures:

1. Amendment No. 77 to DPR-31
2. Amendment No. 71 to DPR-41
3. Safety Evaluation
4. Notice of Issuance

cc w/enclosures:
See next page

*Previous concurrences see next page

ORIGINATOR	ORB#1:DL*	ORB#1:DL*	ORB#1:DL*	AD/OR:DL*	OELD* FRN	
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DATE	02/ /82	02/18/82:ds	02/ /82	02/ /82	02/12/82	

Handwritten notes: FRN admit only, coordinated on model, M. Young, FRN, to EIS

Robert E. Uhrig
Florida Power and Light Company

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

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-250

TURKEY POINT PLANT UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 77
License No. DPR-31

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power and Light Company (the licensee) dated January 1, 1982, 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.

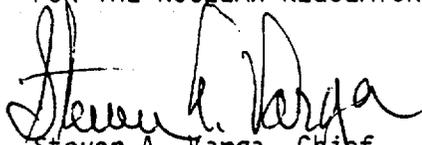
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-31 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 77, are hereby incorporated in the license. The licensee 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


Steven A. Yarga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 18, 1982



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

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-251

TURKEY POINT PLANT UNIT NO. 4

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 71
License No. DPR-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power and Light Company (the licensee) dated January 1, 1982, 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.

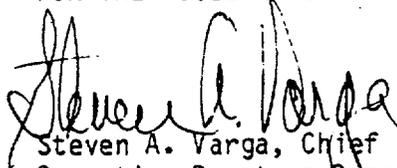
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-41 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 71, are hereby incorporated in the license. The licensee 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


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 18, 1982

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 77 TO FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 71 TO FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Revise Appendix A as follows:

Remove Pages

3.10-2

B3.10-1

Insert Pages

3.10-2

B3.10-1

5. At least ONE residual heat removal pump shall be in operation, unless T_{avg} is less than 160F.
6. When the reactor vessel head is removed and fuel is in the vessel, the minimum boron concentration of 1950 ppm or higher, sufficient to maintain the reactor subcritical by $10\% \Delta k/k$ in the cold condition with all rods inserted shall be maintained in the reactor coolant system and the concentration shall be verified daily.
7. Direct communication between the control room and the refueling cavity manipulator crane shall be available during refueling operation.
8. The spent fuel cask shall not be moved over spent fuel, and only one spent fuel assembly will be handled at one time over the reactor or the spent fuel pit.
9. Fuel which has been discharged from a reactor will not be moved outside the containment in fewer than 100 hours after shutdown

If any one of the specified limiting conditions for refueling is not met, refueling shall cease until specified limits are met, and there shall be no operations which may increase reactivity.

B3.10 BASES FOR LIMITING CONDITIONS FOR OPERATION, REFUELING

Detailed instructions, safety precautions and the design of the fuel handling equipment, incorporating built-in interlocks and safety features, provide assurance that no incident could occur during the refueling operations that would result in a hazard to public health and safety.⁽¹⁾ Whenever changes are not being made in core geometry one flux monitor is sufficient. This permits maintenance of the instrumentation. Continuous monitoring of radiation levels and neutron flux provides immediate indication of an unsafe condition. The residual heat pump is used to maintain a uniform boron concentration.

A boron concentration of 1950 ppm was sufficient to maintain the reactor subcritical by at least 10% $\Delta k/k$ in the cold condition with all rods inserted, and also maintained the core subcritical with no control rods inserted, for the first core design⁽²⁾ The required boron concentration may increase depending on the subsequent core design.

The control room operator will be able to inform the manipulator operator of any impending unsafe condition detected from the control board indicators during fuel movement.

The cask crane interlocks prevent cask handling above spent fuel. An excess weight interlock is provided on the spent fuel bridge crane hoist to prevent movement of more than one fuel assembly at a time. The spent fuel transfer mechanism can accommodate only one fuel assembly at a time.

References

- (1) FSAR - Section 9.5
- (2) FSAR Table 3.2.1-1



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 77 TO FACILITY OPERATING LICENSE NO. DPR-31
AND AMENDMENT NO. 71 TO FACILITY OPERATING LICENSE NO. DPR-41

FLORIDA POWER AND LIGHT COMPANY
TURKEY POINT PLANT UNIT NOS. 3 AND 4
DOCKET NOS. 50-250 AND 50-251

I. Introduction

By letter dated January 13, 1982, the Florida Power and Light Company (the licensee) submitted a request to modify the Technical Specifications, Appendix A to Facility Operating Licenses DPR-31 and DPR-41, for the Turkey Point Plant, Unit Nos. 3 and 4. The proposed amendments clarify the boron concentration required during the refueling operation by including the $\Delta k/k$ requirement of 10% in the Technical Specifications as well as the boron concentration.

II. Evaluation

The current Technical Specifications (3.10.6) require a minimum boron concentration of 1950 ppm in the reactor coolant system when the reactor vessel head is removed and fuel is in the vessel. This concentration must be verified daily. The bases (B3.10) indicate that 1950 ppm is sufficient to maintain the reactor subcritical by 10% $\Delta k/k$ in the cold condition with all rods inserted, and will also maintain the core subcritical with no control rods inserted.

In the design of the earlier cores, the refueling boron concentration of 1950 ppm provided a 10% subcriticality with all rods inserted in the cold condition (reference Table 3.2.1-1 of FSAR). Also, the reactor stayed subcritical with all rods out in the cold condition.

Current cores, such as the Cycle 8 redesign core, are designed for a longer (18 month) operation and have more initial reactivity than the earliest cores. A higher boron concentration than 1950 ppm may be required to keep the core subcritical by 10% $\Delta k/k$ in cold condition with all rods inserted and will also keep the core subcritical with all rods out (reference Table-1).

The required refueling boron concentration has to be calculated for each core design and for each nuclear unit but shall not be less than 1950 ppm.

Since the refueling boron concentration will keep the core subcritical by 10% $\Delta k/k$ the safety of the plant operation will not be compromised.

TABLE - 1

RCS BORON CONCENTRATIONS

	FSAR (1ST CYCLE)	CYCLE - 8 (UNIT - 3)	
		<u>0 MIC</u>	<u>+ MIC *</u>
Refueling Shutdown; Rods in (k = .90)	1950	2000	2200
(k = .95)		1520	1700
Shutdown (k = .99) with Rods Inserted, Clean, Cold	780	1180	1350
Shutdown (k = .99) with Rods Inserted, Clean, Hot	510	750	1080
Shutdown (k = .99) with No Rods Inserted, Clean, Cold	1250	1570	1720
Shutdown (k = .99) with No Rods Inserted, Clean, Hot	1210	1610	1890

NOTES:

- * Cycle 8 for Turkey Point Unit 3 is designed with an alternate Positive Moderator Temperature Coefficient (+ MTC) core.

III. Environmental Consideration

We have determined that the amendments do 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 amendments involve 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 these amendments.

IV. Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: February 18, 1982

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NOS. 50-250 AND 50-251FLORIDA POWER AND LIGHT COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 77 to Facility Operating License No. DPR-31, and Amendment No. 71 to Facility Operating License No. DPR-41 issued to Florida Power and Light Company (the licensee), which revised Technical Specifications for operation of Turkey Point Plant, Unit Nos. 3 and 4 (the facilities) located in Dade County, Florida. The amendments are effective as of the date of issuance.

The amendments clarify the boron concentration required during the refueling operation by including the $\Delta k/k$ requirement in the Technical Specifications as well as the boron concentration.

The application for amendments 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 amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

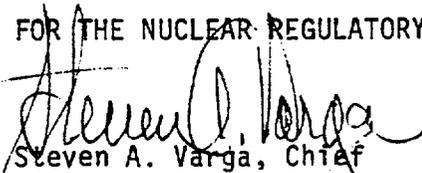
The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance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

- 2 -

For further details with respect to this action, see (1) the application for amendments dated January 13, 1982, (2) Amendment Nos. 77 and 71 to License Nos. DPR-31 and DPR-41, 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 Environmental and Urban Affairs Library, Florida International University, Miami, Florida 33199. 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 18th day of February, 1982.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing