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Docket Nos. 50-250
and 50-251

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. 88 to Facility Operating License No. DPR-31 and Amendment No. 82 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 April 15, 1982.

These amendments change the Technical Specifications to modify F_Q and Figure 3.2-3, K(Z) versus core height, for the repaired steam generators.

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. 88 to DPR-31
2. Amendment No. 82 to DPR-41
3. Safety Evaluation
4. Notice of Issuance

cc: w/enclosures
See next page

FRN & amd only - make correction FR Notice

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SURNAME	KParrish	MGrotenhuis/pn	SVarga	TMNovak	MYoung		
DATE	8/12/82	8/12/82	8/14/82	8/14/82	8/19/82		

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. 88
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 April 15, 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. 88 , 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: August 13, 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. 82
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 April 15, 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. 82 , 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: August 13, 1982

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 88 TO FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 82 TO FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Revise Appendix A as follows:

Remove Pages	Insert Pages
3.2-3	3.2-3
Figure 3.2-3a	Figure 3.2-3a

reactivity insertion upon ejection greater than 0.3% k/k at rated power. Inoperable rod worth shall be determined within 4 weeks.

b. A control rod shall be considered inoperable if

(a) the rod cannot be moved by CRDM, or
(b) the rod is misaligned from its bank by more than 15 inches, or
(c) the rod drop time is not met.

c. If a control rod cannot be moved by the drive mechanism, shutdown margin shall be increased by boron addition to compensate for the withdrawn worth of the inoperable rod.

5. CONTROL ROD POSITION INDICATION

If either the power range channel deviation alarm or the rod deviation monitor alarm is not operable, rod positions shall be logged once per shift and after a load change greater than 10% of rated power. If both alarms are inoperable for two hours or more, the nuclear overpower trip shall be reset to 93% of rated power.

6. POWER DISTRIBUTION LIMITS

a. Hot channel factors:

(1) F_Q Limit

The hot channel factors (defined in Bases) must meet the following limits at all times except during low power physics tests:

$$F_Q(Z) \leq ([F_Q]_{L/P}) \times K(Z), \text{ for } P > 0.5$$

$$F_Q(Z) \leq (2 \times [F_Q]_L) \times K(Z), \text{ for } P \leq 0.5$$

$$F^N_{\Delta H} \leq 1.55\,[1.0 + 0.2\,(1 - P)]$$

Where P is the fraction of rated power at which the core is operating; K(Z) is the function given in Figure 3.2-3 or Figure 3.2-3a; Z is the core height location of F_Q. $[F_Q]_L$ and K(Z) are dependent on the steam generator tube plugging level as follows:

Plugging level	$[F_Q]_L$	Figure Number for K(Z)
>5 % and $\leq$ 28%	2.125	3.2-3*
$\leq$ 5%	2.30	3.2-3a

(2) Augmented Surveillance (MIDS)

If $[F_Q]_p$, as predicted by approved physics calculations, exceeds $[F_Q]_L$ then the power will be limited to a turnon power fraction, P_T, equal to the ratio of $[F_Q]_L$ divided by $[F_Q]_p$, or, for operation at power levels above P_T, augmented surveillance of hot channel factors shall be implemented, except in Base Load

* The F_Q of 2.125 and Figure 3.2-3 do not apply to future degradation of the new steam generators.

HOT CHANNEL FACTOR
NORMALIZED OPERATING ENVELOPE

(for $\leq$ 5% steam generator tube plugging and F_q=2.30)

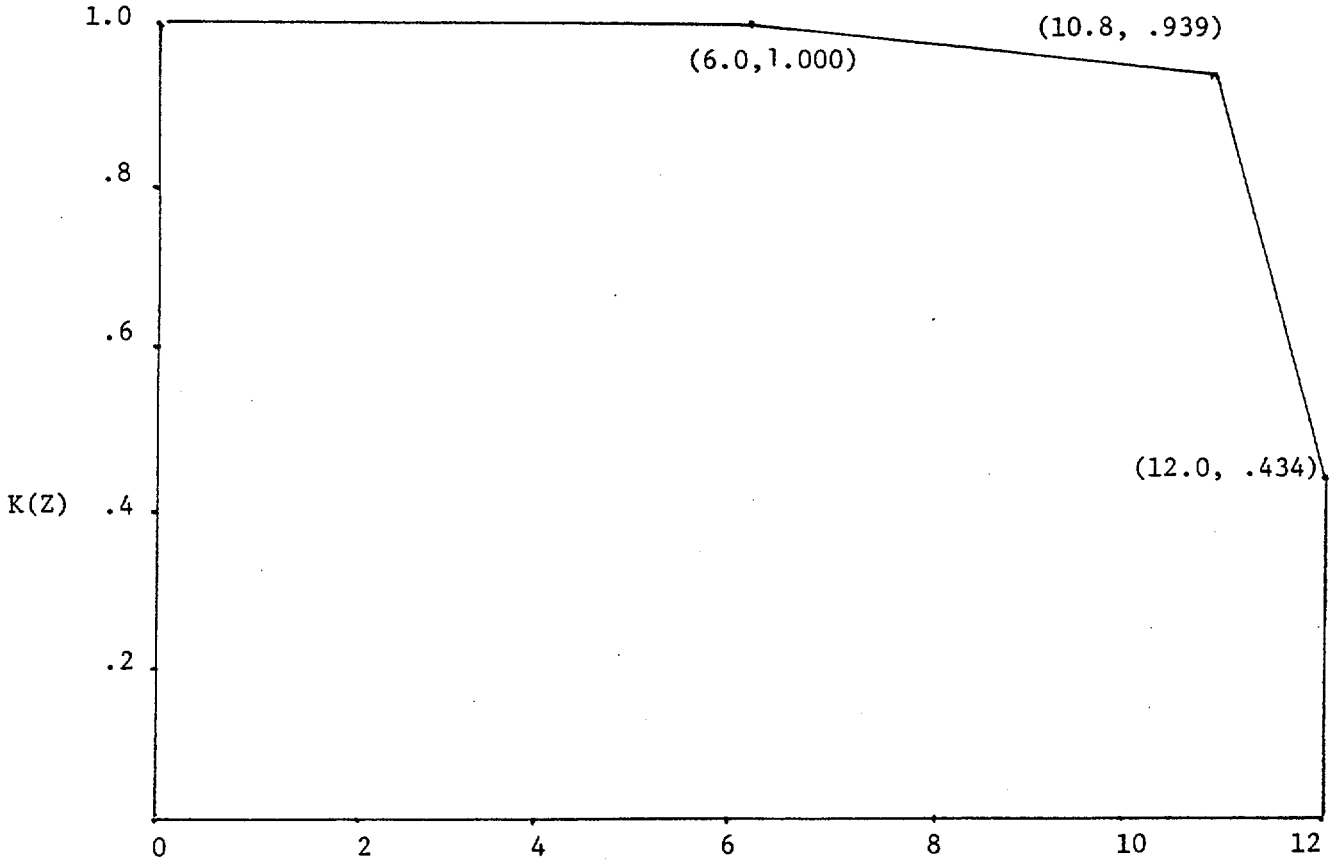

FIG. 3.2-3a

Amendment Nos. 88 & 82

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 88 TO FACILITY OPERATING LICENSE NO. DPR-31

AND AMENDMENT NO. 82 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

Introduction

On April 15, 1982 the Florida Power and Light Company (the licensee) submitted proposed Technical Specification to License Nos. DPR-31 and DPR-41 for the Turkey Point Plant Unit Nos. 3 and 4. The proposed changes to the Technical Specifications would allow operation at a peak power factor, F_Q, equal to 2.30 for steam generator tube plugging (SGTP) $\leq$5%, and at F_Q equal to 2.125 for SGTP in range >5% to $\leq$28%.

BACKGROUND

The initial license for Turkey Point Units 3 and 4 allowed operation at F_Q equal to 2.32. As both plants began to experience progressively more serious levels of tube plugging, F_Q has been decreased, based on repeated analyses. Currently both plants are approved for operation at F_Q equal to 2.125 for SGTP up to 28%.

All steam generators in Unit 3 have recently been replaced, and a similar upgrade is planned for Unit 4. Consequently, the licensee has requested approval to operate the upgraded units at F_Q equal to 2.30 for SGTP up to 5%.

The original FSAR for Turkey Point Units 3 and 4 analyzed the double ended cold leg guillotine (DECLG) break with C_D equal to 0.4, 0.6 and 1.0, and small break LOCA's ranging from 2 inch diameter to 1 foot square. Calculated values of peak clad temperature, maximum clad oxidation and maximum hydrogen generation were within the acceptance criteria of 10 CFR 50.46 for the worst case LOCA, a DECLG with C_D equal to 0.4. A range of transients was also analyzed.

As the degree of tube plugging increased, adjusted values for F_Q were determined based on reanalysis of the DECLG break with C_D equal to 0.4, and in some cases also 0.6. These analyses have assumed that the DECLG with C_D equal to 0.4 is the worst case LOCA regardless of the degree of tube plugging.

The latest analysis also covers only the DECLG with C_D equal to 0.4 and 0.6. Although the replacement of the steam generators return the plants to the condition analyzed in the original FSAR, there are some differences in the new analysis. Most importantly, the model codes have changed considerably to account for better understanding of clad swelling and rupture, two phase flow and other phenomena. Nevertheless, the new calculations for F_Q equal to 2.30 predict compliance with the acceptance criteria of 10 CFR 50.46. Furthermore, the dependence of peak clad temperature on the choice of C_D (Figure 1) leads to the conclusion that the DECLG with C_D equal to 0.4 is still the worst case LOCA.

Non-LOCA transients have not been reanalyzed.

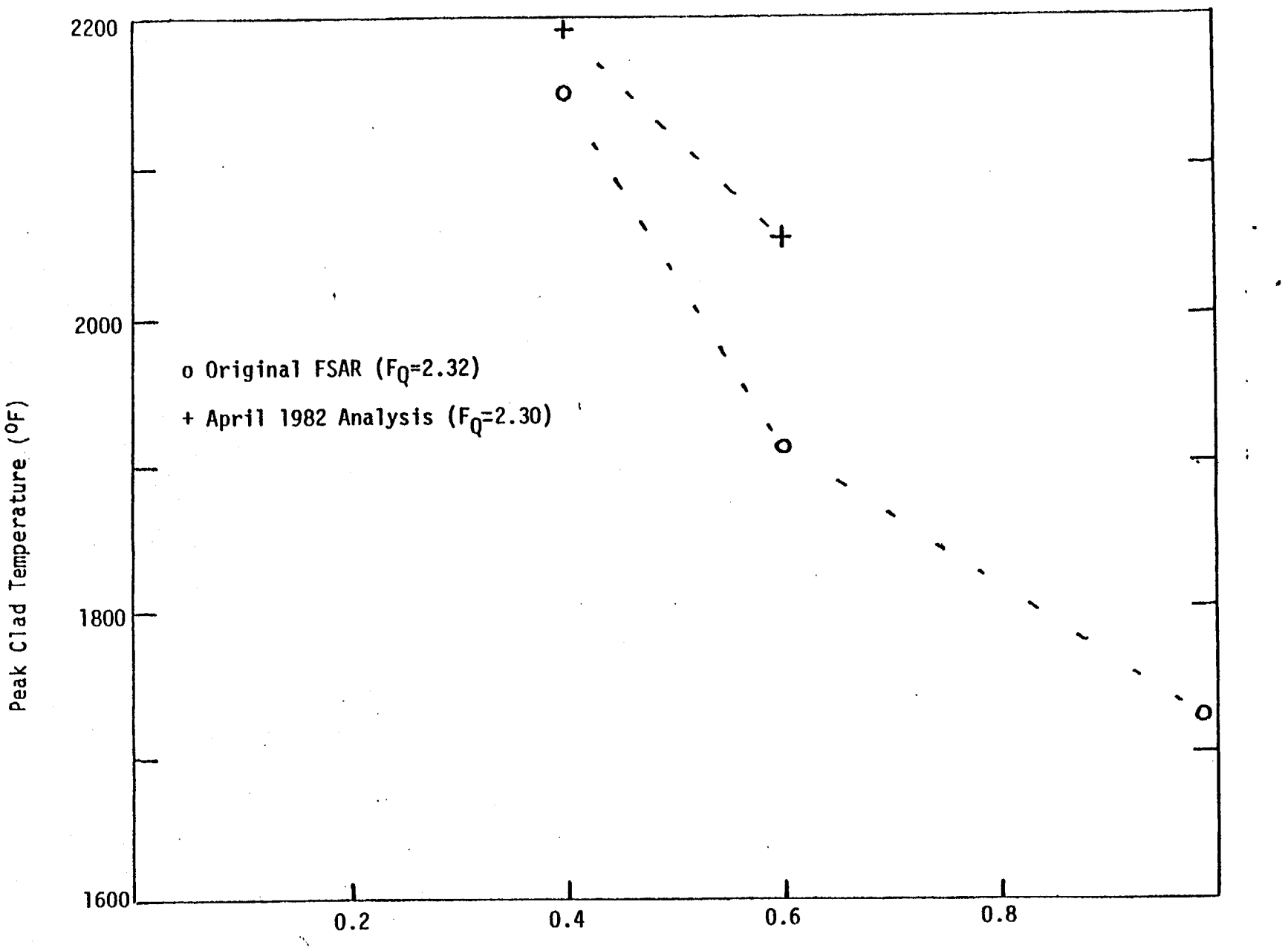

FIGURE 1. Variation of peak clad temperature with discharge coefficient for Turkey Point Units 3 and 4.

EVALUATION

The replacement of all steam generators constitutes essentially a return to the condition which was analyzed in the original FSAR.

Reanalysis of the large break LOCA with the latest approved Westinghouse model (1981 model) has reinforced the original finding that the DECLG with C_D equal to 0.4 is the worst case LOCA. The calculated values of peak clad temperature, maximum clad oxidation and minimum hydrogen generation are within the acceptance criteria of 10 CFR 50.46 for operation at F_Q equal to 2.30 and tube plugging $\leq$ 5%.

The original FSAR contained an extensive analysis of non-LOCA transients. Because the design flow rate has been restored and F_Q is slightly reduced, the non-LOCA analysis from the original FSAR is equally applicable today as it was for the issuance of the original license.

The justification for the use of F_Q equal to 2.125 for SGTP in the range $>$5% to $\leq$28% is based on the March 1981 analysis using the "1978" code with appropriate changes to account for clad swelling and rupture. That analysis is still acceptable, and Unit 4 should be allowed to continue operation in this mode until its steam generators have been replaced.

Summary

The proposed changes to the technical specifications are acceptable. The analyses presented are sufficient to justify the proposed amendment to allow operation of both units at F_Q equal to 2.30 for steam generator tube plugging (SGTP) $\leq$5%. Continued operation of Unit 4 at F_Q equal to 2.125 for SGTP $\leq$ 28% is also acceptable, until its steam generators have been replaced.

The specification of F_Q equal to 2.125 for SGTP in the range >5% to $\leq$28% will not apply to future degradation of the new steam generators. At such time as the tube plugging in the new steam generators exceeds 5%, the licensee should submit a new LOCA analysis using the then current accepted codes. Consequently the specification for operation at F_Q equal to 2.125, and the corresponding K(Z) curve (Figure 3.2-3), will not be valid when all the steam generators in Units 3 and 4 have been replaced.

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.

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 an accident previously evaluated, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant reduction in a margin of safety, 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: August 13, 1982

Principal Contributor:

R. Barrett

7590-01

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-250 AND 50-251

FLORIDA POWER AND LIGHT COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 88 to Facility Operating License No. DPR-31, and Amendment No. 82 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 change the Technical Specifications to modify F_Q and Figure 3.2-3, $K(Z)$ versus core height, for the repaired steam generators.

The application for the 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.

For further details with respect to this action, see (1) the application for amendments dated April 15, 1982, (2) Amendment Nos. 88 and 82 to License Nos. DPR-31 and DPR-41, and (3) the Commission's 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 13th day of August, 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

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