

DISTRIBUTION

- Docket File
- NRC PDR
- Local PDR
- NSIC
- TERA
- ORB 1 File
- D. Eisenhut
- C. Parrish
- M. Grotenhuis
- OELD
- OI&E (5)
- G. Deegan (8)
- B. Scharf (10)
- D. Brinkman
- ACRS (10)
- Clare Miles
- R. Diggs
- R. Ballard

Chairman, ASLAB

DEC 7 1981



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. 74 to Facility Operating License No. DPR-31 and Amendment No. 68 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 25, 1977, as supplemented March 20, and May 1, 1980.

These amendments add the option of using the ΔT vs reactor power curve during shift checks of the Nuclear Power Range instrument channels.

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

Sincerely,

Original Signed By:

Marshall Grotenhuis, Project Manager
 Operating Reactors Branch No. 1
 Division of Licensing

Enclosures:

1. Amendment No. 74 to DPR-31
2. Amendment No. 68 to DPR-41
3. Safety Evaluation
4. Notice of Issuance

cc w/enclosures:
 See next page

Note typographical errors to be corrected on (1) Amendment for Unit 3 at P.1 (2) SER, P.2 - conclusion on no significant hazards (3) Fed Reg. Notice, P.2, citation to 10 CFR 51.5 (d)(4)

OFFICE	ORB 1	ORB 1	ORB 1	AD:OR	OELD	
SURNAME	CParrish	MGrotenhuis	rs SVarga	Novak	U. Young	
DATE	11/15/81	11/23/81	11/25/81	11/25/81	11/30/81	

8201140067 811207
 PDR ADDCK 05000250
 P PDR

Robert E. Uhrig
Florida Power and Light Company

cc: Mr. Robert Lowenstein, Esquire
Lowenstein, Newman, Reis and Axelrad
1025 Connecticut Avenue, N.W.
Suite 1214
Washington, D. C. 20036

Environmental and Urban Affairs Library
Florida International University
Miami, Florida 33199

Mr. Norman A. Coll, Esquire
Steel, Hector and Davis
1400 Southeast First National
Bank Building
Miami, Florida 33131

Mr. Henry Yaeger, Plant Manager
Turkey Point Plant
Florida Power and Light Company
P. O. Box 013100
Miami, Florida 33101

Honorable Dewey Knight
County Manager of Metropolitan
Dade County
Miami, Florida 33130

Bureau of Intergovernmental Relations
560 Apalachee Parkway
Tallahassee, Florida 32304

Resident Inspector
Turkey Point Nuclear Generating Station
U. S. Nuclear Regulatory Commission
Post Office Box 1207
Homestead, Florida 33030

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

Mr. Jack Shreve
Office of the Public Counsel
Room 4, Holland Building
Tallahassee, Florida 32304

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



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. 74
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 25, 1977, as supplemented on March 20 and May 1, 1980, 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.

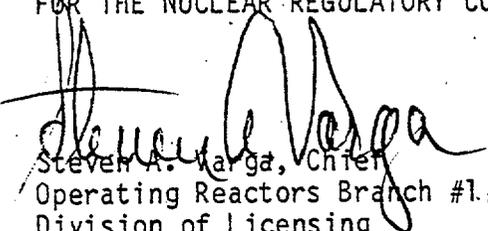
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-31 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 74, 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. Marga, Chief
Operating Reactors Branch #1,
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: DEC 7 1981



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. 68
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 25, 1977, as supplemented on March 20 and May 1, 1980, 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.

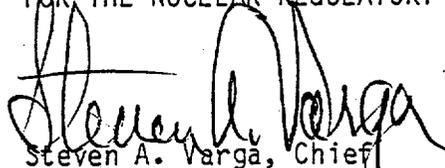
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-41 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 68, 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 #1-2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: DEC 7 1981

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 74 TO FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 68 TO FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Revise Appendix A as follows:

Remove Page

Table 4.1-1

Insert Page

Table 4.1-1

TABLE 4.1-1

MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND
TEST OF INSTRUMENT CHANNELS

<u>CHANNEL DESCRIPTION</u>	<u>CHECK</u>	<u>CALIBRATE</u>	<u>TEST</u>	<u>REMARKS</u>
1.a. Nuclear Power Range (Check, Calibrate and Test only applicable above 10% of rated power.)	S(1) M*(4)	D(2) Q*(4)	M(3)	1) Load vs. flux curve or ΔT vs reactor power curve 2) Thermal power calculation 3) Signal to ΔT ; bistable action (permissive, rod stop, trips) 4) Upper & lower detectors for symmetric offset (+5 to -5%).
b. Power Distribution Map			M(1)	1) Following initial loading and prior to operation above 75% power. 2) Once per effective full power month. 3) Confirm hot channel factor limits.
2. Nuclear Intermediate Range	S(1) [†]	N.A.	P(2)	1) Once/shift up to 50% R&P. 2) Log level; bistable action (permissive, rod stop, trip)
3. Nuclear Source Range	S(1)	N.A.	P(2)	1) Once/shift when in service. 2) Bistable action (alarm, trip)
4. Reactor Coolant Temperature	S [†]	R	B/W(1) [†] (2) [†]	1) Overtemperature- ΔT 2) Overpower- ΔT
5. Reactor Coolant Flow	S [†]	R	M [†]	
6. Pressurizer Water Level	M [†]	R	M [†]	
7. Pressurizer Pressure	S [†]	R	M [†]	
8. 4 kv Voltage & Frequency	N.A.	R**	R	Reactor protection circuits only
9. Analog Rod Position	S [†]	R	M [†]	With step counters.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 74 TO FACILITY OPERATING LICENSE NO. DPR-31
AND AMENDMENT NO. 68 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

By letter dated January 25, 1977 and supplemented on March 20 and May 1, 1980, the Florida Power and Light Company (the licensee) submitted an amendment request which would amend Appendix A of their Facility Operating Licenses DPR-31 and DPR-41 for the Turkey Point Plant Unit Nos. 3 and 4, respectively. These amendments would allow a " ΔT versus reactor power curve" or optionally, for convenience, the already approved method, "load versus flux curve."

EVALUATION

The intent of this evaluation is to determine if the following guidelines are satisfied by either the original method or the proposed method of performing the shift check, in keeping with the basis and testing requirements of IEEE Standard 338:

Guideline 1 would minimize the effort and time required to perform this channel check. Since secondary inefficiencies are not involved, the ΔT versus reactor power method is viewed as meeting this guideline. Allowing the use of either method allows for possible failure of the instrumentation needed for one method of the channel check, and using the other method while repairs are made.

Guideline 2 requires that the testing provide trend data to observe degradation or onset of incipient failure. Either method of channel check satisfies this guideline.

Guideline 3 requires written test procedures. FP&L has provided a marked-up copy of Operating Procedure 12304.3 which allows either method of shift check. This is adequate, as procedures are normally changed after approval to change the method is received.

Guideline 4 allows an instrument check by comparing readings of different variables as long as a known relationship exists. This guideline is satisfied for either method of the power range channel check.

Guideline 5 requires that the total drift in the power range channels be less than +1.0% of full power. FP&L has shown that the proposed ΔT versus reactor power range channel check is conducive to meeting this requirement, and is more accurate than the original flux versus load method.

The enclosed interim report was prepared for us by EG&G Idaho, as part of the DL technical assistance program (FIN No. A6256).

CONCLUSION

Based on our review of the EG&G Idaho technical evaluation, we agree with their findings that the proposed ΔT versus reactor power shift check of the nuclear power range instrument channels is acceptable.

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 accidents previously considered and do not involve a significant decrease in safety margin, they 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 defence and security or to the health and safety of the public.

Date: DEC 7 1981

TECHNICAL EVALUATION REPORT

PROPOSED AMENDMENT TO FACILITY OPERATING LICENSES DPR-31 AND DPR-41
AT VERSUS REACTOR POWER SHIFT CHECK

TURKEY POINT, UNIT NOS. 3 AND 4.

Docket Nos. 50-250 and 50-251

May 1980

A. C. Udy
Reliability and Statistics Branch
Engineering Analysis Division
EG&G Idaho, Inc.

ABSTRACT

Florida Power & Light Company has requested approval of an alternate method for the shift check of the Nuclear Power Range Instrument channels. This report examines the currently approved method and the proposed method of performing this shift check. Either method is satisfactory for providing the shift check.

CONTENTS

1.0	INTRODUCTION	1
2.0	EVALUATION OF THE TURKEY POINT STATION, UNITS 3 AND 4	1
2.1	Review Guidelines	1
2.2	Shift Check Procedures	2
2.3	Shift Check Evaluation	3
3.0	SUMMARY	3
4.0	REFERENCES	4

TECHNICAL EVALUATION REPORT

PROPOSED AMENDMENT TO FACILITY OPERATING LICENSES DPR-31 AND DPR-41 ΔT VERSUS REACTOR POWER SHIFT CHECK

TURKEY POINT, UNIT NOS. 3 AND 4

1.0 INTRODUCTION

On January 25, 1977¹, Florida Power & Light Co. (FPL) requested to amend Appendix A of their Facility Operating Licenses DPR-31 and DPR-41. These licenses are for the Turkey Point Station, Units 3 and 4, respectively. The change is to allow a "ΔT versus reactor power curve" or optionally, for convenience, the already approved method, "load versus flux curve."

FPL letters of March 20, 1980², and May 1, 1980³, provided additional information for this review. Additional information is from the Unit Final Safety Analysis Report (FSAR).

2.0 EVALUATION OF THE TURKEY POINT STATION, UNITS 3 AND 4

2.1 Review Guidelines. The intent of this evaluation is to determine if the following guidelines are satisfied by either the original method or the proposed method of performing the shift check, in keeping with the basis and testing requirements of IEEE Standard 338⁴:

1. Guideline No. 1 - The method should minimize the effort and time required to perform checks, functional tests, and calibration verification.
2. Guideline No. 2 - The testing should provide trend data and the capability to observe degradation and the onset of incipient failures.
3. Guideline No. 3 - Testing should be conducted per written test procedures.

4. Guideline No. 4 - The instrument check can be conducted by comparing readings with different variables that bear a known relationship to one another.

Additionally, the unit FSAR requires, in Section 7.4.4C:

5. Guideline No. 5 - The total error from drift in the power range channels should be less than +1.0% of full power.

2.2 Shift Check Procedures. Table 4.1-1 of the unit Technical Specification requires, at a minimum, the power range channels be checked by the Load Versus Flux curve once per eight-hour shift. This check compares the generator load and back pressure to reactor power.¹ This comparison is done by reading the variables on a graph,² as part of Operating Procedure 12304.3. This provides a shift correction factor to be used when the power range channels are read. No calibration adjustments are made as a result of this check. Secondary inefficiencies (that is, opening heater bypasses, temperature change in cooling water, inaccuracies in backpressure readings, etc.) may require large correction factors¹ "to derive the correct power level" using this method.

As amended, Operating Procedure 12304.3 would allow use of either a ΔT versus power shift check or the load versus flux curve shift check.³ The ΔT versus power method derives a shift correction factor for the power range channels from a graph, and is dependent on the difference between the hot leg and cold leg temperatures. FPL has determined that the ΔT versus power method is accurate to within +0.7%, while the original flux versus load method is accurate to within +1.0%.³

Either method of the channel check is only to detect gross failures¹ (that is, blown fuses, defective instruments, etc.). The requirement for daily calibration of the power range channels is not changed by the proposed change in shift check procedures. FPL is committed to perform both the flux versus load and the ΔT versus reactor power methods initially³, to

acquaint plant personnel with the new method before it is used independently.

2.3 Shift Check Evaluation. Guideline 1 would minimize the effort and time required to perform this channel check. Since secondary inefficiencies are not involved, the ΔT versus reactor power method is viewed as meeting this guideline. Allowing the use of either method allows for possible failure of the instrumentation needed for one method of the channel check, and using the other method while repairs are made.

Guideline 2 requires that the testing provide trend data to observe degradation or onset of incipient failure. Either method of channel check satisfies this guideline.

Guideline 3 requires written test procedures. FPL has provided a marked-up copy of Operating Procedure 12304.3 which allows either method of shift check. This is adequate, as procedures are normally changed after approval to change the method is received.

Guideline 4 allows an instrument check by comparing readings of different variables as long as a known relationship exists. This guideline is satisfied for either method of the power range channel check.

Guideline 5 requires that the total drift in the power range channels be less than $\pm 1.0\%$ of full power. FPL has shown that the proposed ΔT versus reactor power range channel check is conducive to meeting this requirement, and is more accurate than the original flux versus load method.

3.0 SUMMARY

FPL requested approval of an alternate method to provide the shift check of the nuclear power range instrument channels.

The material submitted by FPL identifies Operating Procedure 12304.3 for both methods of the shift check of the power range channels. FPL has shown that the accumulative errors induced by either method will result in

the total drift of the power range channels of less than +1.0% of full scale. The NRC should allow the use of either method.

4.0 REFERENCES

1. FPL letter, Robert E. Uhrig, to Director of Nuclear Reactor Regulation, "Proposed Amendment to Facility Operating Licenses DPR-31 and DPR-41," January 25, 1977, L-77-32.
2. FPL letter, Robert E. Uhrig, to Office of Nuclear Reactor Regulation, "' ΔT Versus Reactor Power' Curve," March 20, 1980, L-80-93.
3. FPL letter, Robert E. Uhrig, to Office of Nuclear Reactor Regulation, "' ΔT Versus Reactor Power' Curve," May 1, 1980, L-80-134.
4. IEEE Standard 338-1975, "IEEE Standard Criteria for the Periodic Testing of Nuclear Power Generating Station Class 1E Power and Protection Systems," Nuclear Power Engineering Committee of the IEEE Power Engineering Society, Institute of Electrical and Electronic Engineers, 1975.

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. 74 to Facility Operating License No. DPR-31, and Amendment No. 68 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 add the option of using the ΔT versus reactor power curve during shift checks of the Nuclear Power Range instrument channels.

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.

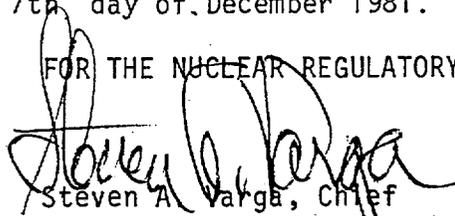
- 2 -

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 January 25, 1977, as supplemented March 20 and May 1, 1980, (2) Amendment Nos. 74 and 68 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 7th day of December 1981.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch No. 1
Division of Licensing