

December 6, 1991

Docket Nos. 50-250
and 50-251

DISTRIBUTION
See attached sheet

Mr. J. H. Goldberg
President-Nuclear Division
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

Dear Mr. Goldberg:

SUBJECT: TURKEY POINT UNITS 3 AND 4 - ISSUANCE OF AMENDMENTS RE: AXIAL FLUX
DIFFERENCE (AFD) (TAC NOS. M81961 AND M81962)
m

The Commission has issued the enclosed Amendment No. 150 to Facility Operating License No. DPR-31 and Amendment No. 145 to Facility Operating License No. DPR-41 for the Turkey Point Plant, Units Nos. 3 and 4, respectively. The amendments consist of changes to the Technical Specifications (TS) in response to your application transmitted by letter dated October 31, 1991.

By letter dated October 29, 1991, as supplemented October 30, 1991, Florida Power and Light Company (FPL) requested that a Temporary Waiver of Compliance (TWOC) be granted with respect to the above-requested change. The NRC verbally granted the TWOC on October 30, 1991, followed by a letter to FPL dated October 31, 1991, documenting the authorization and granting the change until such time as the NRC acts on the proposed amendments. By letter dated October 31, 1991, FPL requested that the amendments be reviewed on an exigent basis.

These amendments allow operation with the AFD outside the ±5% target band, without accruing penalty deviation time, solely for the calibration of excore detectors, provided the AFD is within the acceptable operation limits of TS Figure 3.2-1. In addition, a footnote is modified to include that such surveillance testing will be performed below 90% of rated thermal power.

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,

/s/ by Bart C. Buckley for
Rajender Auluck, Sr. Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 150 to DPR-31
2. Amendment No. 145 to DPR-41
3. Safety Evaluation

NRC FILE CENTER COPY

cc w/enclosures:

See next page

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Mr. J. H. Goldberg
Florida Power and Light Company

Turkey Point Plant

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DATED: December 6, 1991

AMENDMENT NO. 150 TO FACILITY OPERATING LICENSE NO. DPR-31-TURKEY POINT UNIT 3
AMENDMENT NO. 145 TO FACILITY OPERATING LICENSE NO. DPR-41-TURKEY POINT UNIT 4

Docket File

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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. 150
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 October 31, 1991, 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 and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 150, are hereby incorporated in the license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Barth C. Buckley for

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: December 6, 1991



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. 145
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 October 31, 1991, 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 and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 145, are hereby incorporated in the license. The Environmental Protection Plan contained in Appendix B is hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Bart C. Buckley for

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: December 6, 1991

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 150 FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 145 FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Revise Appendix A as follows:

Remove Page

3/4 2-1

Insert Page

3/4 2-1

3/4.2 POWER DISTRIBUTION LIMITS

3/4.2.1 AXIAL FLUX DIFFERENCE

LIMITING CONDITION FOR OPERATION

3.2.1 The indicated AXIAL FLUX DIFFERENCE (AFD) shall be maintained within a $\pm 5\%$ target band (flux difference units) about the target flux difference.

The indicated AFD may deviate outside the above required target band at greater than or equal to 50% but less than 90% of RATED THERMAL POWER provided the indicated AFD is within the Acceptable Operation Limits of Figure 3.2-1 and the cumulative penalty deviation time does not exceed 1 hour during the previous 24 hours.

The indicated AFD may deviate outside the above required target band at greater than 15% but less than 50% of RATED THERMAL POWER provided the cumulative penalty deviation time does not exceed 1 hour during the previous 24 hours.

APPLICABILITY: MODE 1, above 15% of RATED THERMAL POWER.*#

ACTION:

- a. With the indicated AFD outside of the above required target band and with THERMAL POWER greater than or equal to 90% of RATED THERMAL POWER, within 15 minutes either:
 1. Restore the indicated AFD to within the target band limits, or
 2. Reduce THERMAL POWER to less than 90% of RATED THERMAL POWER.

- b. With the indicated AFD outside of the above required target band for more than 1 hour of cumulative penalty deviation time during the previous 24 hours or outside the Acceptable Operation Limits of Figure 3.2-1 and with THERMAL POWER less than 90% but equal to or greater than 50% of RATED THERMAL POWER:
 1. Reduce THERMAL POWER to less than 50% of RATED THERMAL POWER within 30 minutes, and
 2. Reduce the Power Range Neutron Flux* - High Trip Setpoints to less than or equal to 55% of RATED THERMAL POWER within the next 4 hours.

- c. With the indicated AFD outside of the above required target band for more than 1 hour of cumulative penalty deviation time during the previous 24 hours and with THERMAL POWER less than 50% but greater

*See Special Test Exceptions Specification 3.10.2.

#Surveillance testing of the Power Range Neutron Flux Channels may be performed (below 90% of RATED THERMAL POWER) pursuant to Specification 4.3.1.1 provided the indicated AFD is maintained within the Acceptable Operation Limits of Figure 3.2-1. A total of 16 hours operation may be accumulated with the AFD outside of the above required target band during testing without penalty deviation.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 150 TO FACILITY OPERATING LICENSE NO. DPR-31
AND AMENDMENT NO. 145 TO FACILITY OPERATING LICENSE NO. DPR-41

FLORIDA POWER AND LIGHT COMPANY

TURKEY POINT UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

1.0 INTRODUCTION

By letter L-91-301, dated October 31, 1991, Florida Power and Light Company (FPL) requested exigent amendments to the Turkey Point Units 3 and 4 Technical Specifications (TS). The proposed change would modify TS 3.2.1 by referencing footnote "#" in the APPLICABILITY statement of the specification rather than in ACTION statement (b). In addition, this footnote would be modified to include that the surveillance testing would be performed below 90% of rated thermal power. The purpose of these amendments is to allow operation at power levels up to 90% of rated thermal power (RTP) with the axial flux difference (AFD) outside of the $\pm 5\%$ target band without accruing penalty deviation time, solely for the purpose of calibrating the excore detectors. The AFD would still be required to be within the acceptable operation limits of TS Figure 3.2-1.

FPL requested that this proposal be processed as an exigent amendment in accordance with 10 CFR 50.91(a)(6). The basis for this request was that there was inadequate time for the usual amendment process because the surveillance of the excore detectors is performed quarterly. A temporary waiver of compliance (TWOC) was verbally granted by the NRC on October 30, 1991 in response to FPL letters dated October 29, 1991 (L-91-294), as supplemented October 30, 1991 (L-91-303) which permitted Turkey Point to perform the necessary surveillance and allow escalation of Unit 4 to full power. This verbal authorization was documented in a letter to FPL from the NRC dated October 31, 1991.

2.0 EVALUATION

The AFD is a measure of axial power distribution as measured by the excore power range channels. Sufficient time must be available in order to perform a controlled xenon oscillation for the incore/excore calibration. Normally, 16 hours has been accepted as an adequate time interval to allow data retrieval

and avoid violating TS constraints. Therefore, TS 3.2.1 contains a footnote which allows 16 hours of operation outside the referenced AFD target band of $\pm 5\%$, but within the acceptable operation limits of Figure 3.2-1, for the purpose of performing an incore/excore calibration of the nuclear instrumentation system detectors.

In the Turkey Point TS, this footnote applies to ACTION statement (b)(2), which limits the power level for the incore/excore calibration to less than 50% RTP. However, this directly conflicts with TS Table 4.3-1, "Reactor Trip System Instrumentation Surveillance Requirements," Item 2.a "Power Range, Neutron Flux - High Setpoint Channel Calibration," which references footnote (6) and states that the incore/excore calibration must be performed above 75% of RTP, unless sustained operation is below that power level. Calorimetric calculations become less accurate at low power levels and, therefore, uncertainties below 50% RTP can reduce confidence in the incore/excore calibration.

Therefore, since operation for 16 hours outside of the AFD target band, but within the acceptable operation limits of TS Figure 3.2-1, is acceptable for the purpose of performing an incore/excore calibration and this calibration should be performed above 75% of RTP for desired accuracy, the staff finds the proposed modification acceptable. By relocating the footnote of interest to the APPLICABILITY statement, the calibration can be performed at power levels to 90% RTP. It should also be noted that the currently approved TS for Comanche Peak Unit 1, as well as the latest draft of NUREG-1431, "Westinghouse Owner's Group Methodically Engineered, Restructured, and Improved Technical Specifications," both reference this footnote with the APPLICABILITY statement of the AFD specification.

3.0 FINDINGS

The staff has reviewed the request for exigent license amendments to Turkey Point Units 3 and 4 to allow operation with the AFD outside the $\pm 5\%$ target band for power levels up to 90% RTP without accruing penalty deviation time, solely for the purpose of calibrating the excore detectors. The AFD would still remain within the acceptable operation limits of TS Figure 3.2-1. Based on the above evaluation, the NRC staff finds the proposed request acceptable.

4.0 EXIGENT CIRCUMSTANCES

Following calibration of the Unit 3 excore detectors at 100% power, the licensee discovered an inconsistency in the surveillance requirements between different sections of Turkey Point's new standard TS and that Unit 3 was unable to concurrently satisfy the requirements of both TS 3.2.1 and 4.3.1.1. Because of the location of the footnote, the excore calibration could not be performed at the power level stated TS Table 4.3-1 with the AFD outside the TS-allowed target band. The licensee explored two options: (1) the performance of the surveillance while maintaining the $\pm 5\%$ AFD target band, or (2) performance of the surveillance with a more appropriate AFD, following NRR approval of a temporary waiver of compliance. The licensee concluded that the level of

uncertainty associated with the setpoints obtained through performance of the surveillance within its $\pm 5\%$ AFD target band was not consistent with prudent plant operation or proper engineering judgement. At that time, the licensee proceeded to develop the request for a TWOC and proposed license amendments to permanently correct the TS. The NRC staff finds that with the issuance of TWOC and the license amendments, there is a net increase in the safety, and therefore, the licensee has satisfied the requirements of 10 CFR 50.91(a)(6) and, that a valid exigency exists.

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards considerations if operation of the facility in accordance with the amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The Commission has determined that the amendments involve no significant hazards consideration per 10 CFR 50.92, based on the licensee's analysis provided in their October 31, 1991 letter and presented below:

- (1) [Operation of the facility in accordance with its proposed amendments would not] involve a significant increase in the probability or consequences of an accident previously evaluated.

[These] proposed license amendment[s] [do] not involve a significant increase in the probability or consequences of an accident previously evaluated. The proposed change does not affect any equipment whose malfunction is postulated to initiate an accident or prevent an accident from occurring. Changes in axial flux difference due to power changes and control rod motion, like that in the excore detector calibration, are part of normal and anticipated behavior. Therefore, this change does not cause a significant increase in the probability or occurrence of any previously evaluated accident.

Axial flux difference is used to assure that peaking factors and axial power distributions are within the limits used as input to various Condition II, III, and IV events. Analyses outside the AFD target band, but within the Accepted Operation Limits of Figure 3.2-1, for up to 1 hour, are included in the reload design and safety analyses. The proposed change permits operation outside the AFD target band within the Accepted Operation Limits of Figure 3.2-1, for up to 16 hours while calibrating the excore detectors, rather than the 1 hour allowed during normal operation. Just as with Special Test Exceptions, Technical Specification 3/4.2.1 is less

restrictive during excore calibration due to the low probability of accidents occurring during this calibration (which will be performed at less than or equal to 90% power). Performance of this test at a reduced power level and maintaining the Technical Specification requirements on rod insertion limits will not significantly increase the consequences of an accident previously evaluated.

- (2) [Operation of the facility in accordance with its proposed amendments would] not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed license amendment[s] [do] not create the possibility of a new or different kind of accident from any accident previously evaluated. The amendment[s] [do] not change any plant equipment or operations. Therefore, no possibility of creating a new or different type of accident would result from [these] proposed license amendment[s].

- (3) [Operation of the facility in accordance with its proposed amendments would not] involve a significant reduction in a margin of safety.

The proposed amendment[s] [do] not involve a significant reduction in the margin of safety. The consequences of core accidents are based on the limiting assumptions for the core peaking factors. No changes to the peaking factors are required to support these proposed license amendment[s]. The proposed change permits operation outside of the AFD target band, within the Accepted Operation Limits of Figure 3.2-1, for up to 16 hours while calibrating the excore detectors, rather than the 1 hour allowed during normal operation. Just as with Special Test Exceptions, Technical Specification 3/4.2.1 is less restrictive during excore calibration due to the low probability of accidents occurring during this calibration (which will be performed at less than or equal to 90% power). In addition, excore calibration is a controlled plant evolution with enhanced operator and Reactor Engineering oversight. Therefore, the proposed change does not involve a significant reduction in the margin of safety.

The NRC staff has reviewed the licensee's analysis and, based on this review, concludes that the analysis demonstrates that the applicable criteria are met. Accordingly, the Commission has made a final determination that the amendments involve no significant hazards consideration.

3.0 STATE CONSULTATION

Based upon the written notice of the proposed amendments, the Florida State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

These amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve 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 the amendments involve no significant hazards consideration and there has been no public comment on such finding (56 FR 57537). Accordingly, these amendments meet 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 these amendments.

5.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: L. Kopp
R. Auluck

Date: December 6, 1991