

August 13, 1996

DISTRIBUTION
See attached sheet

Mr. T. F. Plunkett
President - Nuclear Division
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: TURKEY POINT UNITS 3 AND 4 - ISSUANCE OF AMENDMENTS RE: SMALL BREAK
LOSS-OF-COOLANT ACCIDENT (SBLOCA) RE-ANALYSIS (TAC NOS. M93066 AND
M93067)

Dear Mr. Plunkett:

The Commission has issued the enclosed Amendment No. 190 to Facility Operating License No. DPR-31 and Amendment No. 184 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 (TS) in response to your application dated July 26, 1995, and additional information provided by letters dated March 13, 1996, May 3, 1996, and May 9, 1996.

Please note that use of WCAP-10054-P, Addendum 2, Revision 1, "Addendum to the Westinghouse Small Break LOCA ECCS Evaluation Model Using the NOTRUMP Code: Safety Injection in the Broken Loop and Improved Condensation Model," October 1995, is not allowed until approved by the NRC. This is noted on the revised TS page enclosed.

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,

Original signed by
Richard P. Croteau, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-250
and 50-251

Enclosures:

1. Amendment No. 190 to DPR-31
2. Amendment No. 184 to DPR-41
3. Safety Evaluation

cc w/enclosures: See next page

Document Name: G:TURKEY\TP93066.AMD *SEE PREVIOUS CONCURRENCE

OFFICE	LA:PDII-3	PM:PDII-3	OGC*	D:PDII-3	
NAME	B. Clayton	R. Croteau		F. Hebdon	
DATE	7/2/96	7/2/96	6/17/96	7/2/96	
COPY	(Yes)/No	(Yes)/No	Yes/No	Yes/No	

OFFICIAL RECORD COPY

9608150187 960813
PDR ADOCK 05000250
PDR

FILE CENTER COPY

DATED: August 13, 1996

AMENDMENT NO. 190 TO FACILITY OPERATING LICENSE NO. DPR-31-TURKEY POINT UNIT 3
AMENDMENT NO. 184 TO FACILITY OPERATING LICENSE NO. DPR-41-TURKEY POINT UNIT 4

Distribution

Docket File

PUBLIC

PDII-3 Reading

S. Varga, 14/E/4

G. Hill, (4) T-5C-3

C. Grimes, 11/F/23

ACRS

C. Morris CVM, (SE)

August 13, 1996

DISTRIBUTION
See attached sheet

Mr. T. F. Plunkett
President - Nuclear Division
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: TURKEY POINT UNITS 3 AND 4 - ISSUANCE OF AMENDMENTS RE: SMALL BREAK
LOSS-OF-COOLANT ACCIDENT (SBLOCA) RE-ANALYSIS (TAC NOS. M93066 AND
M93067)

Dear Mr. Plunkett:

The Commission has issued the enclosed Amendment No. 190 to Facility Operating License No. DPR-31 and Amendment No. 184 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 (TS) in response to your application dated July 26, 1995, and additional information provided by letters dated March 13, 1996, May 3, 1996, and May 9, 1996.

Please note that use of WCAP-10054-P, Addendum 2, Revision 1, "Addendum to the Westinghouse Small Break LOCA ECCS Evaluation Model Using the NOTRUMP Code: Safety Injection in the Broken Loop and Improved Condensation Model," October 1995, is not allowed until approved by the NRC. This is noted on the revised TS page enclosed.

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,
Original signed by
Richard P. Croteau, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-250
and 50-251

Enclosures:

1. Amendment No. 190 to DPR-31
2. Amendment No. 184 to DPR-41
3. Safety Evaluation

cc w/enclosures: See next page

Document Name: G:TURKEY\TP93066.AMD *SEE PREVIOUS CONCURRENCE

OFFICE	LA:PDII-3	PM:PDII-3	OGC*	D:PDII-3	
NAME	BClayton	RCroteau		FHebdon	
DATE	7/12/96	7/12/96	6/17/96	7/12/96	
COPY	Yes/No	Yes/No	Yes/No	Yes/No	

OFFICIAL RECORD COPY

Mr. T. F. Plunkett
Florida Power and Light Company

Turkey Point Plant

cc:

J. R. Newman, Esquire
Morgan, Lewis & Bockius
1800 M Street, N.W.
Washington, DC 20036

Mr. Joe Myers, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive
Tallahassee, Florida 32399-2100

Jack Shreve, Public Counsel
Office of the Public Counsel
c/o The Florida Legislature
111 West Madison Avenue, Room 812
Tallahassee, Florida 32399-1400

Regional Administrator,
Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W. Suite 2900
Atlanta, Georgia 30323

John T. Butler, Esquire
Steel, Hector and Davis
4000 Southeast Financial Center
Miami, Florida 33131-2398

Attorney General
Department of Legal Affairs
The Capitol
Tallahassee, Florida 32304

Mr. Robert J. Hovey, Site
Vice President
Turkey Point Nuclear Plant
Florida Power and Light Company
P.O. Box 029100
Miami, Florida 33102

Plant Manager
Turkey Point Nuclear Plant
Florida Power and Light Company
P. O. Box 029100
Miami, Florida 33102

Armando Vidal
County Manager
Metropolitan Dade County
111 NW 1 Street, 29th Floor
Miami, Florida 33128

Mr. H.N. Paduano, Manager
Licensing & Special Programs
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

Senior Resident Inspector
Turkey Point Nuclear Generating
Station
U.S. Nuclear Regulatory Commission
P.O. Box 1448
Homestead, Florida 33090

Mr. Gary E. Hollinger
Licensing Manager
Turkey Point Nuclear Plant
P.O. Box 4332
Princeton, Florida 33023-4332

Mr. Bill Passetti
Office of Radiation Control
Department of Health and
Rehabilitative Services
1317 Winewood Blvd.
Tallahassee, Florida 32399-0700

Mr. Kerry Landis
U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W. Suite 2900
Atlanta, Georgia 30323-0199



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-250

TURKEY POINT PLANT UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 190
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 July 26, 1995, and additional information provided by letters dated March 13, 1996, May 3, 1996, and May 9, 1996, 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.

9608150190 960813
PDR ADOCK 05000250
PDR

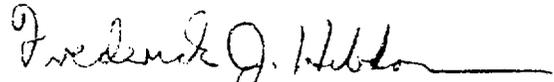
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-31 is hereby amended to read as follows:

(B) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No.190 , 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Frederick J. Hebdon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 13, 1996



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-251

TURKEY POINT PLANT UNIT NO. 4

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 184
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 July 26, 1995, and additional information provided by letters dated March 13, 1996, May 3, 1996, and May 9, 1996, 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.

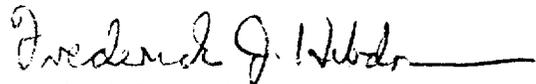
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-41 is hereby amended to read as follows:

(B) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 184, 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Frederick J. Hebdon, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 13, 1996

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO.190 FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO.184 FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Revise Appendix A as follows:

Remove page

Insert page

6-20

6-21

6-20

6-21

PEAKING FACTOR LIMIT REPORT

6.9.1.6 The $W(Z)$ function(s) for Base-Load Operation corresponding to a $\pm 2\%$ band about the target flux difference and/or a $\pm 3\%$ band about the target flux difference, the Load-Follow function $F_Z(Z)$ and the augmented surveillance turnon power fraction, P_T , shall be provided to the U.S. Nuclear Regulatory Commission, whenever P_T is < 1.0 . In the event, the option of Baseload Operation (as defined in Section 4.2.2.3) will not be exercised, the submission of the $W(Z)$ function is not required. Should these values (i.e., $W(Z)$, $F_Z(Z)$ and P_T) change requiring a new submittal or an amended submittal to the Peaking Factor Limit Report, the Peaking Factor Limit Report shall be provided to the NRC Document Control desk with copies to the Regional Administrator and the Resident Inspector within 30 days of their implementation, unless otherwise approved by the Commission.

The analytical methods used to generate the Peaking Factor limits shall be those previously reviewed and approved by the NRC. If changes to these methods are deemed necessary they will be evaluated in accordance with 10 CFR 50.59 and submitted to the NRC for review and approval prior to their use if the change is determined to involve an unreviewed safety question or if such a change would require amendment of previously submitted documentation.

CORE OPERATING LIMITS REPORT

6.9.1.7 Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT (COLR) before each reload cycle or any remaining part of a reload cycle for the following:

1. Axial Flux Difference for Specification 3.2.1.
2. Control Rod Insertion Limits for Specification 3.1.3.6.
3. Heat Flux Hot Channel Factor - $F_Q(Z)$ for Specification 3/4.2.2.
4. All Rods Out position for Specification 3.1.3.2.

The analytical methods used to determine the AFD limits shall be those previously reviewed and approved by the NRC in:

1. WCAP-10216-P-A, "RELAXATION OF CONSTANT AXIAL OFFSET CONTROL F_Q SURVEILLANCE TECHNICAL SPECIFICATION," June 1983.
2. WCAP-8385, "POWER DISTRIBUTION CONTROL AND LOAD FOLLOWING PROCEDURES - TOPICAL REPORT," September 1974.

The analytical methods used to determine the $K(Z)$ curve shall be those previously reviewed and approved by the NRC in:

1. WCAP-9220-P-A, Rev. 1, "Westinghouse ECCS Evaluation Model - 1981 Version," February 1982.
2. WCAP-9561-P-A, ADD. 3, Rev. 1, "BART A-1: A Computer Code for the Best Estimate Analysis of Reflood Transients - Special Report: Thimble Modeling W ECCS Evaluation Model."
3. WCAP-10054-P-A, (proprietary), "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code," August 1985.

CORE OPERATING LIMITS REPORT (Continued)

4. WCAP-10054-P, Addendum 2, Revision 1 (proprietary), "Addendum to the Westinghouse Small Break LOCA ECCS Evaluation Model Using the NOTRUMP Code: Safety Injection in the Broken Loop and Improved Condensation Model," October 1995.#

The analytical methods used to determine Rod Bank Insertion Limits and the All Rods Out position shall be those previously reviewed and approved by the NRC in:

1. WCAP-9272-P-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985.

The ability to calculate the COLR nuclear design parameters are demonstrated in:

1. Florida Power & Light Company Topical Report NF-TR-95-01, "Nuclear Physics Methodology for Reload Design of Turkey Point & St. Lucie Nuclear Plants".

Topical Report NF-TR-95-01 was approved by the NRC for use by Florida Power & Light Company in:

1. Safety Evaluation by the Office of Nuclear Reactor Regulations Related to Amendment No. 174 to Facility Operating License DPR-31 and Amendment No. 168 to Facility Operating License DPR-41, Florida Power & Light Company Turkey Point Units 3 and 4, Docket Nos. 50-250 and 50-251.

The AFD, K(Z), and Rod Bank Insertion Limits shall be determined such that all applicable limits of the safety analyses are met. The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector, unless otherwise approved by the Commission.

| # This reference is only to be used subsequent to NRC approval. |



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO.190 TO FACILITY OPERATING LICENSE NO. DPR-31
AND AMENDMENT NO.184 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 dated July 26, 1995, Florida Power and Light (FPL or the licensee) proposed a change to the Technical Specifications (TS) for Turkey Point Units 3 and 4. Additional information was provided by letters dated March 13, 1996, May 3, 1996, and May 9, 1996. The information provided by these letters did not change the original no significant hazards determination. The proposed changes would change TS 6.9.1.7, Core Operating Limits Report, by inserting references to two analytical methods to determine the K(z) Curve. This results from a reanalysis of the small break LOCA for the Turkey Point Units using the NOTRUMP code including the COSI safety injection (SI) condensation model. The small-break LOCA reanalysis was performed to support the future power up-rate to 2,300 MWth in both Turkey Point Units which is being evaluated separately by the staff.

2.0 EVALUATION

The initial and boundary conditions for the small-break LOCA reanalysis were chosen conservatively. For the up-rated power level of 2300 MWth the total peaking factor is 2.5. The hot-rod power shape accounts for axial offset plus 20% concentrating power distribution in the upper core region. The power shape is a flat k(z). The high head safety injection flow rate assumes only one operating pump at a degraded level of performance. The reactor rated power assumes a 2% calorimetric error and a high T_{avg} . For single failure it is assumed that an emergency train and the associated ECCS components are not operable. Loss of offsite power was also assumed coincident with reactor trip. For small-break LOCA the Westinghouse code NOTRUMP is used. NOTRUMP incorporates the COSI model, which accounts for steam condensation due to high head injection in either the broken or the intact loops. The COSI steam condensation model is described in WCAP-10054-P, Addendum 2, Revision 1, Addendum to the Westinghouse Small-Break LOCA Evaluation Model Using the NOTRUMP Code "Safety Injection Into the Broken Loop and COSI Condensation Model" Westinghouse Electric Corporation, by C.M. Thompson et al., October 1995 and WCAP-11767, "COSI SI/Steam Condensation Experiment Analysis" Westinghouse Electric Corporation, by D.J. Shimeck. The COSI model has been reviewed by the staff and formal approval is expected, but not yet issued.

A spectrum of four cases was analyzed. The 3 inch cold-leg break was found to be the limiting small-break LOCA with respect to peak cladding temperature with a value of 1,688 °F. This value accounts for the impact of an interruption in safety injection of up to 2 minutes. This interruption would occur at the end of the RWST injection (260,000 gallons minimum) when switch over to cold-leg recirculation takes place. During this interruption it was estimated that the fuel cladding will undergo a 400 °F temperature rise assuming that the heat-up is adiabatic. The two minutes are needed for the switch-over and valve stroke time. The operation is covered by the Turkey Point Emergency Operating Procedures (EOPs) 3/4-ES-1.3 "Transfer to Cold Leg Recirculation" steps 19 through 25.

Because the small-break LOCA analysis was performed using an NRC-approved code and the results satisfy the requirements of 10 CFR 50.46, we find the results acceptable.

2.1 Proposed Technical Specification Changes

The technical specification controls section 6.9.1.7 will be modified to reference the k(z) curve in the evaluation. The following references will be added:

3. WCAP-10054-P-A (Proprietary) and WCAP-10081-NPA (non-proprietary) "Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code", October 1985.
4. WCAP-10054-P Addendum 2, Revision 1, (Proprietary) "Addendum to the Westinghouse Small Break ECCS Evaluation Model Using the NOTRUMP Code: Safety Injection into the Broken Loop and COSI Condensation Model", October 1995.#

#This reference is only to be used subsequent to NRC approval.

The changes are justified because they reflect the changes to the NOTRUMP code on which the small break LOCA analysis was based. Therefore, they are acceptable.

2.2 Summary

Staff review of the submittal showed that the small break LOCA analysis was performed with conservative assumptions, using a code reviewed by the staff, for which formal approval is expected shortly. The results satisfy the requirements of 10 CFR 50.46, and therefore, are acceptable. Consequently we find the proposed technical specifications to be acceptable, subject to the limitation that they will become effective after the issuance of the NOTRUMP code COSI modification.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements 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 (60 FR 47618). Accordingly, the amendments must 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 the 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: L. Lois

Date: August 13, 1996