

August 26, 1991

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Docket Nos. 50-250
and 50-251

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*Posted
amdt 143 to DPR 41*

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: COMPONENT COOLING WATER HEAT EXCHANGER TESTS (TAC NOS. 80678 AND 80679)

The Commission has issued the enclosed Amendment No. 148 to Facility Operating License No. DPR-31 and Amendment No. 143 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 in response to your application transmitted by letter dated June 21, 1991.

These amendments revise Technical Specification 4.7.2.b to allow reactor coolant temperature heatup to 547°F prior to conducting component cooling water heat exchanger performance tests, while still requiring performance of the test prior to entering mode 2. This will improve the accuracy of the test results.

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)

Rajender Auluck, Sr. Project Manager
Project Directorate II-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 148 to DPR-31
- 2. Amendment No. 143 to DPR-41
- 3. Safety Evaluation

cc w/enclosures:
See next page

*Original to
Rajender Auluck
8/1/91*

JFC	:LA:PDII-2	:PE:PDII-2	:PM:PDII-2	:D:PDII-2	:OGC	:C:SP
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Mr. J. H. Goldberg
Florida Power and Light Company

Turkey Point Plant

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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. 148
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 June 21, 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.



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. 143
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 June 21, 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.

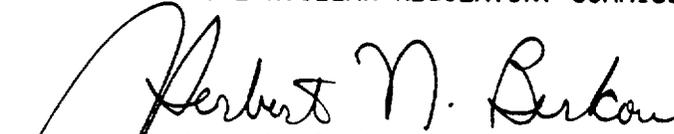
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-31 is hereby amended to read as follows:

(B) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 148, 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 the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



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: August 26, 1991

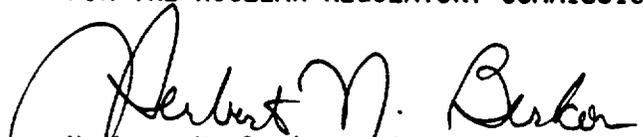
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-41 is hereby amended to read as follows:

(B) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No.143 , 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 the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



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: August 26, 1991

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 148 FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 143 FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Revise Appendix A as follows:

Remove Page

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Insert Page

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SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 31 days by: (1) verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position, and (2) verifying by a performance test the heat exchanger surveillance curves.*
- c. At least once per 18 months during shutdown, by verifying that:
 - 1) Each automatic valve servicing safety-related equipment actuates to its correct position on a SI test signal, and
 - 2) Each Component Cooling Water System pump starts automatically on a SI test signal.
 - 3) Interlocks required for CCW operability are OPERABLE.

*Technical specification 4.7.2.b(2) is not applicable for entry into MODE 4-or MODE 3, provided that:

- 1) Surveillance 4.7.2.b(2) is performed no later than 72 hours after reaching a Reactor Coolant System Tavg of 547°F, and
- 2) MODE 2 shall not be entered prior to satisfactory performance of this surveillance.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 148 TO FACILITY OPERATING LICENSE NO. DPR-31
AND AMENDMENT NO. 143 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 June 21, 1991, Florida Power and Light Company (the licensee) requested approval of amendments to the Technical Specifications (TS) of the Turkey Point Plant Units 3 and 4. Specifically, the proposed amendments would revise Technical Specification 4.7.2.b to allow heatup to 547°F prior to conducting component cooling water (CCW) heat exchanger performance tests, while still requiring performance of the test prior to entering mode 2.

2.0 DISCUSSION

Turkey Point monitors intake cooling water (ICW) temperatures and CCW heat exchanger performance to assure that adequate heat removal capability is maintained. CCW heat exchanger performance tests are accomplished by measuring a temperature differential across each CCW heat exchanger for both ICW and CCW. Heat exchanger fouling and allowable ICW temperatures are then calculated using the differential temperatures (delta-T) and ICW flow rates. When the Reactor Coolant System (RCS) average temperature is at least 547°F, the heat load on the heat exchangers is adequate to provide significant delta-Ts, such that the calculation is reasonably accurate. With RCS temperatures less than 200°F, the heat load, and therefore the delta-Ts, are small. The ICW delta-T under these conditions is approximately 0.3°F. Therefore, the magnitude of the potential measurement errors approaches the actual delta-T values, resulting in unreliable calculations.

The current surveillance requirement is applicable to modes 1, 2, 3, and 4. The licensee proposes to conduct this surveillance only after plant heatup to at least 547°F, but prior to entering mode 2. In order to assure CCW operability and satisfactory heat exchanger performance prior to entering mode 4, the licensee will clean the CCW heat exchangers prior to mode 4 operation when TS 4.7.2.b would otherwise prohibit entry into mode 4 (i.e., when greater than 31 days have elapsed since the heat exchanger performance test was satisfactorily accomplished). In addition, CCW operability will be confirmed in accordance with TS 4.7.2.a prior to entry into mode 4. By performing the heat exchanger performance tests under hot plant conditions and prior to entry

into mode 2, the licensee proposes to confirm CCW operability and satisfactory heat exchanger performance prior to reactor criticality.

3.0 EVALUATION

The operability of the CCW system ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. Under the current TS 4.7.2.b, the heat exchanger performance test is required prior to entry into mode 4, and at least once every 31 days thereafter while in modes 1, 2, 3, or 4. Conduct of this test prior to mode 4 operation is unreliable due to small (near zero) delta-Ts across the heat exchangers. These small delta-Ts result from the low RCS system temperature and reduced heat loads, and they magnify the inherent instrument errors. In the worst case, these errors could cause indication of satisfactory heat exchanger performance when heat exchanger performance is, in fact, unsatisfactorily degraded. As a result, the plant could be heated up and the reactor taken critical with insufficient component cooling.

By increasing the RCS temperature prior to conduct of the heat exchanger performance test of TS 4.7.2.b(2), greater heat loads are placed on the heat exchangers, resulting in larger delta-Ts. This, in turn, minimizes the effect of instrument errors on the calculations of heat exchanger performance. The test then provides greater assurance of heat exchanger operability, and the corresponding ability of the CCW system to cool safety-related components during normal and accident conditions. Assurance of satisfactory heat exchanger performance is thus deferred until the RCS temperature is at least 547°F. Additionally, the licensee has committed to cleaning the heat exchangers prior to mode 4 operations, when more than 31 days have elapsed since the heat exchanger performance was verified in accordance with TS 4.7.2.b(2).

In conclusion, CCW system operability will be demonstrated prior to mode 4 operation in accordance with TS 4.7.2.a, and heat exchanger performance will be demonstrated by conduct of the performance test of TS 4.7.2.b(2) prior to mode 2 operation if not performed during the previous 31 days. The staff accepts this means of demonstrating CCW system operability during plant heatup.

4.0 STATE CONSULTATION

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

5.0 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 and changes surveillance requirements. 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 33957). 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.

6.0 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 Contributor: D. Dorman

Date: August 26, 1991