

June 28, 1994

Docket Nos. 50-250  
and 50-251

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: CONTAINMENT  
SPRAY SYSTEM SURVEILLANCE REQUIREMENTS (TAC NOS. M89323 AND M89324)

The Commission has issued the enclosed Amendment No. 165 to Facility Operating License No. DPR-31 and Amendment No. 159 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 dated April 19, 1994, concerning the containment spray system. Specifically, you proposed to change the surveillance interval specified for air or smoke flow test through the containment spray header from once per 5 years to once per 10 years.

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-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 165 to DPR-31
2. Amendment No. 159 to DPR-41
3. Safety Evaluation

cc w/enclosures:  
See next page

Distribution - See next page

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*Received on 6/9/94*

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*\* subject to conclusion of comment period.*

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DATED: June 28, 1994

AMENDMENT NO. 165 TO FACILITY OPERATING LICENSE NO. DPR-31-TURKEY POINT UNIT 3  
AMENDMENT NO. 159 TO FACILITY OPERATING LICENSE NO. DPR-41-TURKEY POINT UNIT 4

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Turkey Point Plant

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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. 165  
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 19, 1994, 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.

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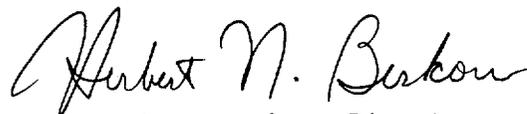
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-31 is hereby amended to read as follows:

(B) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No.165, 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



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: June 28, 1994



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. 159  
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 19, 1994, 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.

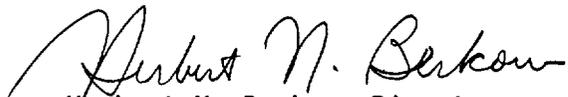
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-41 is hereby amended to read as follows:

(B) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 159, 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



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: June 28, 1994

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 165 FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 159 FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NOS. 50-250 AND 50-251

Revise Appendix A as follows:

Remove page

Insert page

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## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- c. At least once per 18 months during shutdown by:
  - 1) Verifying that each automatic valve in the flow path actuates to its correct position on a containment spray actuation test signal, and
  - 2) Verifying that each spray pump starts automatically on a containment spray actuation test signal. The manual isolation valves in the spray lines at the containment shall be locked closed for the performance of these tests.
  
- d. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 165 TO FACILITY OPERATING LICENSE NO. DPR-31  
AND AMENDMENT NO. 159 TO FACILITY OPERATING LICENSE NO. DPR-41

FLORIDA POWER AND LIGHT COMPANY

TURKEY POINT UNITS 3 AND 4

DOCKET NOS. 50-250 AND 50-251

1.0 INTRODUCTION

By letter dated April 19, 1994, Florida Power & Light Company (FPL, licensee) requested amendments to the Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Units 3 and 4, respectively. The proposed amendments would change the surveillance interval specified for performing an air or smoke flow test through the containment spray (CS) headers from 5 years to 10 years.

2.0 BACKGROUND

2.1 System Description

The primary purpose of the CS system is to spray cool water into the containment atmosphere when appropriate in the event of a loss-of-coolant accident. This ensures that containment pressure does not exceed its licensed design value. The operation of either of the spray pumps will provide heat removal capability to maintain the post accident containment pressure below the design value. The two CS subsystems consist of a pump, associated valving and piping, and spray headers and nozzles independently capable of delivering 1450 gpm to the containment atmosphere. The source of water is from the refueling water storage tank and subsequent recirculation of water from the containment sump.

The spray nozzles, of the ramp bottom design, are not subject to clogging by particles less than 3/8 inch in maximum dimension. During spray recirculation operation, the water is screened through a 1/4-inch mesh before leaving the containment sump. The spray nozzles are bronze and have a 3/8-inch diameter orifice. There are 86 Spraco Model 1713 nozzles distributed on each of two main headers.

2.2 Technical Specifications

The current TS have an allowable outage time (AOT) of 72 hours for one train of CS inoperable and an AOT of 1 hour for both CS trains inoperable. Surveillance requirements include a 31-day check of the valve positions and power availability, ASME Code testing of differential pressure during recirculation, 18-month

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verification of automatic valve and pump actuation (with manual isolation valves closed to prevent actual spray into containment), and a 5-year air or smoke flow test through each spray header to verify that each spray nozzle is unobstructed.

### 2.3 History

The NRC staff studied industry experience regarding problems which were identified by the CS system air or smoke flow test through each spray header/nozzle. The only problems in pressurized water reactor CS systems were those that were construction-related. One of the three cases involved Turkey Point Unit 4.

In August 1978, while preparing for a spray nozzle flow test, FPL discovered that the restricting orifices were not installed in the branch connections from the containment spray headers to the emergency filter spray system. This incident has since been corrected and no problems have been encountered since. Seven surveillance air flow tests have been performed at Turkey Point Units 3 and 4 from 1978 through 1991. Either Hastings Air-Meters or infrared thermography were used for flow verification and all tests clearly demonstrated that obstructions did not exist for any of the spray nozzles.

Based on the staff investigation of problems associated with this CS system surveillance test and other screening criteria established for evaluating surveillance requirements, the staff recommended extending the test interval to once every 10 years. This recommendation is documented in NUREG-1366, "Improvements to Technical Specifications Surveillance Requirements," December 1992. Generic Letter (GL) 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation" also recommended increasing this surveillance interval to every 10 years.

## 3.0 EVALUATION

### 3.1 Standard Review Plan

To meet the GDC 39 and 40 requirements regarding inspection and testing, provisions should be made in the design of containment heat removal systems for periodic inspection and operability testing of the systems and system components such as the spray nozzles.

These provisions have been made and are not changed by extending the test interval from 5 to 10 years for this test.

### 3.2 Revised Standard TS (rSTS)

The equivalent surveillance test in the rSTS requires verifying each spray nozzle is unobstructed every 10 years. The rSTS basis states that "With the containment spray inlet valves closed and the spray header drained of any solution, low pressure air or smoke can be blown through test connections. This ensures that each spray nozzle is unobstructed and provides assurance that spray coverage of

the containment during an accident is not degraded. Due to the passive design of the nozzle, a test at 10 year intervals is considered adequate to detect obstruction of the nozzles."

The proposed change is consistent with the rSTS.

### 3.3 GL 93-05

FPL considers the findings and recommendations of GL 93-05 and NUREG-1366 with respect to the containment spray header air or smoke flow test are compatible with plant operating experience at both Turkey Point Units 3 and 4.

The staff agrees with the licensee and the recommendation of GL 93-05. Extending this surveillance interval to 10 years is appropriate.

### 3.4 Summary

Changing this surveillance interval to every 10 years, combined with the other TS-required surveillance, ensures the availability of the CS system to perform its intended design function. The staff finds the proposed change of the surveillance frequency for performing an air or smoke flow test through the containment spray headers from 5 years to 10 years acceptable.

## 4.0 STATE CONSULTATION

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

## 5.0 ENVIRONMENTAL CONSIDERATION

These amendments change the 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 (59 FR 27055). 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 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.

Principle contributor: R. Croteau

Date: June 28, 1994