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 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250  
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251

AUTH. NAME AUTHOR AFFILIATION  
 BOHLKE, W.H. Florida Power & Light Co.

RECIP. NAME RECIPIENT AFFILIATION  
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SUBJECT: Application for amends to Licenses DPR-31 & DPR-41,  
 modifying Tech Spec 4.7.2 re component cooling water sys  
 surveillance requirements to permit verification of HX  
 surveillance curves via tests under plant conditions.

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**FPL**

P.O. Box 14000, Juno Beach, FL 33408-0420

**JUNE 21 1991**

L-91-176  
10 CFR 50.90

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Gentlemen:

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Proposed License Amendment  
Component Cooling Water System Surveillances

In accordance with 10 CFR 50.90, Florida Power & Light Company (FPL) requests that Facility Operating License DPR-31 and DPR-41 be amended to modify Turkey Point Units 3 and 4 Technical Specifications. The section to be modified is Technical Specification 4.7.2, Component Cooling Water System Surveillance Requirements. The purpose of this amendment is to revise the above section to permit the verification of the heat exchanger surveillance curves by performing Component Cooling Water heat exchanger performance tests under plant conditions which improve the accuracy of the test results.

FPL has determined that the proposed license amendment does not involve a significant hazard pursuant to 10 CFR 50.92. A description of the amendment request is provided in Attachment 1. The no significant hazards determination in support of the proposed Technical Specification change is provided in Attachment 2. Attachment 3 provides the proposed revised Technical Specification changes.

In accordance with 10 CFR 50.91(b)(1), a copy of this proposed License Amendment is being forwarded to the State Designee for the State of Florida.

The proposed amendment has been reviewed by the Turkey Point Plant Nuclear Safety Committee and the FPL Company Nuclear Review Board.

Should there be any questions on this request, please contact us.

Very truly yours,

W. H. Bohlke  
Vice President  
Nuclear Engineering and Licensing

WHB/GS

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P PDR

an FPL Group company

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ADD 11



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Attachments

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant  
Mr. Jacob Daniel Nash, Florida Department of Health and  
Rehabilitative Services




[illegible]

Robert E. Grazio being first duly sworn, deposes and says:

That he is Director, Nuclear Licensing, of Florida Power and Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information and belief, and that he is authorized to execute the document on behalf of said Licensee.

  
Robert E. Grazio

Subscribed and sworn to before me this

21<sup>st</sup> day of June, 1991.

Roberta S Economy

NOTARY PUBLIC, in and for the County of  
Palm Beach, State of Florida

My Commission expires \_\_\_\_\_

Notary Public, State of Florida  
My Commission Expires June 1, 1993  
Bonded Thru Troy Fain - Insurance Inc.

*[Faint, illegible handwritten notes]*



**ATTACHMENT 1**

**DESCRIPTION OF AMENDMENT REQUEST**



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Turkey Point Units 3 and 4  
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#### DESCRIPTION OF AMENDMENT REQUEST

The proposed amendment revises the Turkey Point Technical Specifications to permit the verification of the heat exchanger surveillance curves by performing Component Cooling Water (CCW) heat exchanger performance tests under plant conditions which improve the accuracy of the test results. The description of this change is provided below.

A note will be added to surveillance 4.7.2.b, stating that

"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  $T_{avg}$  of 547°F, and
- 2) MODE 2 shall not be entered prior to satisfactory performance of this surveillance."

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. This process is satisfactory when the average Reactor Coolant System temperature is at least 547°F and the heat load on the heat exchanger is sufficient to produce  $\Delta T$ s of adequate magnitude. Magnitude is significant because even at 100% power the heat load is only 10-15% of the design heat load of  $60 \times 10^6$  Btu/hr per heat exchanger (assuming three CCW heat exchanger operation). The corresponding  $\Delta T$ s are approximately 2°F for ICW and 4°F for CCW.

During mode 5 conditions (i.e., below 200°F) the heat load and consequent  $\Delta T$  values are very small. Under these circumstances, the plant may provide a heat load of less than  $1.1 \times 10^6$  Btu/hr per CCW heat exchanger. The ICW  $\Delta T$  under this condition is approximately .3°F.

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The magnitude of the potential errors associated with the measurement uncertainties in the instrumentation approaches the actual delta-T values at very low heat loads. This results in calculated minimum ICW temperatures which are unreliable.

To assure CCW operability and satisfactory heat exchanger performance upon entry into mode 4, Turkey Point will clean the CCW heat exchangers prior to mode 4 operation when TS 4.7.2.b would otherwise prohibit entry into mode 4. Heat exchanger performance curves following heat exchanger cleaning, based on historical data, have been generated. CCW operability will be confirmed in accordance with TS 4.7.2.a by verifying that the ICW temperature is below the limits identified by these curves prior to entry into mode 4. By performing heat exchanger performance tests prior to entry into mode 2, CCW operability and satisfactory heat exchanger performance is confirmed prior to reactor criticality.

The proposed change does not affect the initiator of any accident evaluated in the FSAR nor the mitigation of any accident. Based on the above, there is no significant increase in the probability or consequences of an accident previously evaluated.



**ATTACHMENT 2**

**DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION**

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#### DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

The Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed 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.

1. Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

This change does not revise any minimum equipment requirements nor any plant operating parameters. CCW heat exchanger performance monitoring will continue to assure CCW system operability. Prior to the performance of the heat exchanger performance test, the satisfactory performance every 12 hours of the surveillance described in Technical Specification 4.7.2.a verifies the CCW system's capability to remove the design basis heat loads. Verification of CCW heat exchanger performance prior to entry into mode 2 ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during accident conditions as described in the FSAR. Therefore, the proposed change does not affect the probability or consequences of accidents previously analyzed.

2. Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

No new types of equipment are added by this change. The proposed change introduces no changes in operation or new modes of operation. The ability of the CCW system to provide the appropriate heat removal capability is maintained.





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3. Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

CCW heat exchanger performance upon entry into mode 4 is confirmed by verifying that the ICW temperature is below the limits identified by heat exchanger performance curves based on historical post-cleaning data. By performing heat exchanger performance tests prior to entry into mode 2, CCW operability and satisfactory heat exchanger performance is confirmed prior to reactor criticality. Prior to the performance of the heat exchanger performance test, the satisfactory performance every 12 hours of the surveillance described in Technical Specification 4.7.2.a verifies the CCW system's capability to remove the design basis heat loads. Based on the above, the proposed amendment does not involve a significant reduction in a margin of safety.

