



FPL

FEB 24 1999

L-99-018  
10 CFR 50.36  
10 CFR 50.90

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

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Proposed License Amendments  
Ultimate Heat Sink Technical Specification Changes

In accordance with 10 CFR 50.90, Florida Power and Light Company (FPL) requests that Appendix A of Facility Operating Licenses DPR-31 and DPR-41 be amended to modify the Turkey Point Units 3 and 4 Technical Specification 3/4.7.4 to remove restrictions on the location at which the temperature of the Ultimate Heat Sink may be monitored.

FPL has determined that the proposed license amendments do not involve a significant hazards consideration pursuant to 10 CFR 50.92. A description of the amendments is provided in Attachment 1. The No Significant Hazards Consideration Determination in support of the proposed Technical Specification changes is provided in Attachment 2. Attachment 3 provides the proposed revisions to the Technical Specification page.

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 license amendments have been reviewed by the Turkey Point Plant Nuclear Safety Committee and the FPL Company Nuclear Review Board. FPL requests that these amendments be reviewed and approved by June 15, 1999.

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

Very truly yours,

R. J. Hovey  
Vice President  
Turkey Point Plant

SM

Attachments

cc: Regional Administrator, Region II, USNRC  
Florida Department of Health and Rehabilitative Services  
Senior Resident Inspector, USNRC, Turkey Point Plant

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Turkey Point Units 3 and 4  
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Ultimate Heat Sink Technical Specification Changes

STATE OF FLORIDA            )  
                                  ) ss.  
COUNTY OF MIAMI-DADE    )

R. J. Hovey being first duly sworn, deposes and says:

That he is Vice President, Turkey Point Plant, 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.

  
R. J. Hovey

Subscribed and sworn to before me this

23<sup>RD</sup> day of February, 1999.

Olga Hanek  
Olga Hanek  
Name of Notary Public (Type or Print)



R. J. Hovey is personally known to me.



ATTACHMENT 1

DESCRIPTION OF AMENDMENTS REQUEST

**Purpose**

The proposed changes revise the Technical Specification (TS) to remove the restriction to monitor the Ultimate Heat Sink (UHS) temperature only in the Intake Cooling Water (ICW) bay and prior to ICW pumps. These changes would provide the flexibility to monitor UHS water temperature after the ICW pumps and prior to the Component Cooling Water (CCW) heat exchangers.

**Background**

The UHS at Turkey Point is provided by a closed cooling canal system located south of the plant. Over 160 miles of canals, approximately 200 feet wide by 4 feet deep serve the two nuclear and two fossil power plants located at Turkey Point.

The original custom Technical Specifications for Turkey Point Units 3 and 4 did not include specifications for the UHS. The UHS TS 3/4.7.4 was added by License Amendments 137/132 as part of the Revised Technical Specification upgrade program. TS 3/4.7.4 requires the UHS to be operable with an average supply water temperature to the ICW system less than or equal to 100°F. Accordingly, the UHS temperature is monitored prior to the ICW pumps in the ICW bay.

**Discussion**

The UHS provides a heat sink for removing processing and operating heat from safety related components during a transient or an accident as well as during normal operation by utilizing the ICW and CCW systems. The limit on the UHS temperature in conjunction with an operable CCW system will ensure that sufficient cooling capacity is available either (1) to provide normal cooldown of the facility, or (2) to mitigate the effects of accident conditions within acceptable limits.

The ICW system ensures that sufficient cooling capacity is available for the continued operation of safety-related equipment during normal and accident conditions. The design and operation of this system ensures cooling capacity consistent with the assumptions used in the safety analyses. The ICW system consists, in part, of three ICW pumps providing flow to three safety related CCW heat exchangers and two non-safety related Turbine Plant Cooling Water (TPCW) heat exchangers. In the event of an accident, the non-safety related TPCW heat exchangers are automatically isolated so that sufficient ICW flow is provided to the safety related CCW heat exchangers.

The design basis of the ICW system is that one ICW pump will provide the cooling water required to two CCW heat exchangers for heat removal during a design basis accident, i.e., a loss-of-coolant accident. The CCW system is an intermediate cooling system serving normal and emergency containment cooling, residual heat removal, spent fuel cooling, and cooling of various other safety related components. The analyses of record assume that the temperature of the cooling water supplied by the ICW pumps to the inlet of the CCW heat exchangers does not exceed 100°F. This temperature limit is monitored by TS 3/4.7.4, Ultimate Heat Sink.



TS 3/4.7.4 addresses the UHS System operability by requiring the average supply water temperature to the ICW System to be within specified limits and to be monitored daily. The TS 3/4.7.4 states, "The ultimate heat sink shall be OPERABLE with an average supply water temperature to the Intake Cooling Water System less than or equal to 100°F."

The proposed TS amendments would change the TS 3/4.7.4 to read, "The ultimate heat sink shall be OPERABLE with an average supply water temperature less than or equal to 100°F." This change would permit the option of monitoring the UHS temperature after the ICW pumps but prior to the CCW heat exchangers, which is considered to be equivalent to temperature monitoring before the ICW pumps.

Measuring the UHS temperature after the ICW pumps but prior to the CCW heat exchangers will result in a representative temperature reading, since the UHS fluid will be fully mixed after leaving the ICW pumps and will be representative of the bulk UHS temperature. The effect of pump heating on the UHS fluid is negligible due to high water volume and low head nature of the ICW pumps. For these reasons, monitoring the UHS after the ICW pumps but prior to the CCW heat exchangers will provide an equivalent location for monitoring this variable.

The surveillance requirement of TS 3/4.7.4 verifies that the ICW system could adequately cool the CCW system to at least the maximum accident or normal design heat loads. The TS surveillance requirement 4.7.4 states, "The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average supply water temperature\* to the Intake Cooling Water System to be within its limit." The asterisk (\*) refers to a footnote that reads, "Portable monitors may be used to measure the temperature."

The proposed TS amendments would change surveillance requirement 4.7.4 to read, "The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average supply water temperature\* to be within its limit." This change would permit the option to use the instrumentation after the ICW pumps and prior to the inlet of the CCW heat exchangers to meet the Technical Specification Surveillance Requirement 4.7.4. The footnote, "Portable monitors may be used to measure the temperature," remains unchanged. It provides the alternative to use portable monitors to measure the UHS temperature.

A portable thermocouple instrument is currently used prior to the ICW pumps to meet TS surveillance requirement 4.7.4. Instrumentation located after the ICW pumps at the CCW heat exchanger inlet, which is currently used in monitoring the CCW heat exchanger performance, could be used in monitoring the UHS temperature. The ability to use this instrumentation provides an alternative to Operations personnel for meeting this surveillance, with equivalent results.

In summary, the proposed revision will allow greater flexibility in the manner in which the temperature of the UHS is monitored. This change does not impact the underlying intent or purpose of the TS, it is consistent with the wording used in the Improved Standard Technical Specifications provided in NUREG-1431, and it will not adversely impact plant safety or unit operation.



**Description of Proposed Changes**

TS LIMITING CONDITION FOR OPERATION 3.7.4 and TS SURVEILLANCE REQUIREMENTS 4.7.4 are revised to delete the phrase "... to the Intake Cooling Water System..." The following proposed changes are shown in Attachment 3.

The proposed LIMITING CONDITION FOR OPERATION shall read:

3.7.4 The ultimate heat sink shall be OPERABLE with an average supply water temperature less than or equal to 100° F.

The proposed SURVEILLANCE REQUIREMENTS shall read:

4.7.4 The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average supply water temperature\* to be within its limit.

The APPLICABILITY and ACTION statements of TS 3/4.7.4 remain unchanged. The footnote "Portable monitors may be used to measure the temperature" remains unchanged. This allows the option to measure the UHS temperature with the existing portable thermocouple equipment if the instrumentation after the ICW pumps at Unit 3 or Unit 4 CCW heat exchanger inlets is not functioning.

**Justification:**

The reason for the proposed changes is to permit FPL the option of monitoring UHS temperature by monitoring the temperature in the ICW system piping going to the inlet of the CCW heat exchangers. Monitoring the UHS temperature after the ICW pumps but prior to the CCW heat exchangers is considered to be equivalent to temperature monitoring before the ICW pumps. The supply water leaving the ICW pumps will be mixed and therefore, it will be representative of the bulk UHS temperature to the CCW heat exchanger inlet. The effects of the pump heating on the supply water are negligible due to the low ICW pump head and high water volume. Accordingly, monitoring the UHS temperature after the ICW pumps but prior to the CCW heat exchangers will provide an equivalent location for monitoring this variable.



## ATTACHMENT 2

### NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

#### Introduction

The Nuclear Regulatory Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92). A proposed amendment to an operating license for a facility involves no significant hazards, 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, (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. Each standard is discussed below for the proposed amendments.

#### Discussion

- (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.

The method of monitoring the Ultimate Heat Sink temperature is not considered in, and has no effect on, the probability of any type of accident initiating sequence. The proposed changes will permit other means of monitoring the Ultimate Heat Sink that have been evaluated to be equivalent to the current method permitted. As the monitoring will continue to be performed by equal means, the consequences of any accident previously evaluated will not be affected.

- (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.

The proposed change will permit other means of monitoring the Ultimate Heat Sink temperature, which will be equal to the methods currently employed. The continued monitoring of this variable by equivalent means cannot create the possibility of a new or different type of accident.

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

The Ultimate Heat Sink temperature is an input assumption used in the accident analysis and in evaluation of component design. This temperature limit is not being altered by this change, only the permissible means of monitoring this variable. As any new methods employed are expected to be equivalent to those currently used, no reduction in any margin of safety will result.

Based on the preceding evaluation, FPL has determined that the proposed amendments request does not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (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; therefore the proposed changes do not involve a significant hazards consideration as defined in 10 CFR 50.92.