



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 200 TO FACILITY OPERATING LICENSE NO. DPR-31

AND AMENDMENT NO. 194 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 February 24, 1999, Florida Power and Light Company (FPL) requested a Technical Specification (TS) revision for Turkey Point Plant, Units 3 and 4. The proposed amendments would change TS 3/4.7.4 "ULTIMATE HEAT SINK" to remove the restriction to monitor the ultimate heat sink (UHS) temperature only in the intake cooling water (ICW) bay and prior to the ICW pumps. This change would permit the option of monitoring the UHS temperature after the ICW pumps but prior to the component cooling water (CCW) heat exchangers, which is considered to be equivalent to temperature monitoring before the ICW pumps.

2.0 EVALUATION

The UHS provides a sink for removing 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 to provide normal cooldown of the facility, or to mitigate the effects of accident conditions.

The design basis of the ICW system at Turkey Point 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 current analysis assumes 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. 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.

Measuring the UHS temperature after the ICW pumps but prior to the CCW heat exchangers will result in a representative temperature reading, because 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

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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 Bases for TS 3/4.7.4 "ULTIMATE HEAT SINK" state that "The limit on ultimate heat sink temperature in conjunction with the SURVEILLANCE REQUIREMENTS of Technical Specification 3/4.7.2 [for the "COMPONENT COOLING WATER 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."

"With the implementation of the CCW heat exchanger performance monitoring program, the limiting UHS temperature can be treated as a variable with an absolute upper limit of 100°F without compromising any margin of safety. Demonstration of actual heat exchanger performance capability supports system operation with postulated canal temperature greater than 100°F. Therefore, an upper Technical Specification limit of 100°F is conservative."

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."

Based on its review, the staff concludes that the proposed revision to TS 3/4.7.4 provides an equivalent manner to monitor the temperature of the UHS. This revision does not adversely impact public health and safety. Therefore, the staff finds that it is acceptable.

### 3.0 TS REVISION

Based on the above discussion, the staff finds that the following TS changes are acceptable.

In TS 3/4.7.4 "ULTIMATE HEAT SINK" the phrase "... to the Intake Cooling Water System..." is deleted from the LIMITING CONDITION FOR OPERATION AND FROM THE SURVEILLANCE REQUIREMENTS. Therefore, the revised LIMITING CONDITION FOR OPERATION and SURVEILLANCE REQUIREMENTS will read, respectively, as follows:

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

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.

### 4.0 STATE CONSULTATION

Based upon a letter dated March 8, 1991, from Mary E. Clark of the State of Florida, Department of Health and Rehabilitative Services, to Deborah A. Miller, Licensing Assistant, U.S. Nuclear Regulatory Commission, the State of Florida does not desire notification of issuance of license amendments.



## 5.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the 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 (64 FR 14282).

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 the amendments.

## 6.0 CONCLUSION

Based on the staff evaluation in Section 2.0 above, the staff concludes that the proposed Technical Specification changes are acceptable.

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.

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**TURKEY POINT PLANT**

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