

Attachment to July 18<sup>th</sup>, 2014  
10 C.F.R. 2.206 Enforcement Petition  
Florida Power & Light Company  
Turkey Point Nuclear Plant

## Attachment – Nine

Letter from the Florida Power & Light Co. to the NRC dated July 29<sup>th</sup>, 2014 - License Amendment Request No. 231, Application to Revise Ultimate Heat Sink Temperature Limit - Supplement 2, and Response to Request for Additional Information (RAI-5 and BOP RAIs 5 and 5.1) (23-pages).



10 CFR 50.90  
L-2014-250  
July 29, 2014

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Renewed Facility Operating License Nos. DPR-31 and DPR-41

Subject: License Amendment Request No. 231, Application to Revise Ultimate Heat Sink Temperature Limit – Supplement 2, and Response to Request for Additional Information (RAI-5 and BOP RAIs 5 and 5.1)

- References:
1. Florida Power & Light Company (FPL) Letter L-2014-216, "License Amendment Request No. 231, Application to Revise Technical Specifications to Revise Ultimate Heat Sink Temperature Limit," dated July 10, 2014.
  2. Florida Power & Light Company Letter L-2014-226, "License Amendment Request No. 231, Application to Revise Ultimate Heat Sink Temperature Limit – Request for Emergency Approval," July 17, 2014.
  3. Email from A. Klett (NRC) to R. Tomonto, et al. (FPL), "Turkey Point 3 and 4 Request for Additional Information - LAR 231 (TAC MF4392 and MF4393)," dated July 18, 2014 (RAIs 1-3)
  4. Florida Power & Light Company Letter L-2014-235, "License Amendment Request No. 231, Application to Revise Ultimate Heat Sink Temperature Limit – Supplement 1, and Response to Request for Additional Information," dated July 22, 2014.
  5. Email from A. Klett (NRC) to R. Tomonto, et al. (FPL), "Turkey Point 3 and 4 Request for Additional Information - LAR 231 (TACs MF4392 and MF4393)," dated July 21, 2014 (BOP RAIs).
  6. Email from A. Klett (NRC) to R. Tomonto, et al. (FPL), "Turkey Point 3 and 4 Request for Additional Information - LAR 231 (TACs MF4392 and MF4393)," dated July 25, 2014 (BOP RAIs 5.1 and 6, SCVB RAI 3).
  7. Email from A. Klett (NRC) to R. Tomonto, et al. (FPL), "Turkey Point 3 and 4 Request for Additional Information - LAR 231 (TACs MF4392 and MF4393)," dated July 26, 2014.

In Reference 1 Florida Power & Light Company (FPL) requested an amendment to the Technical Specifications (TS) for the Turkey Point Nuclear Plant (Turkey Point), Units 3 and 4. In Reference 2 FPL requested the U.S. Nuclear Regulatory Commission (NRC) to review and

A001  
NRR

approve the application on an emergency basis. The NRC staff forwarded to FPL a request for information (RAI) in Reference 3. FPL replied to the Reference 3 RAI and supplemented the application in Reference 4. This letter supplements the application by revising the proposed Surveillance Requirements (SR) for the ultimate heat sink (UHS). In addition, this supplement includes a proposed change to the Component Cooling Water (CCW) system SR. The revision to the proposed SRs is contained in Enclosure 1. In addition, Enclosure 2 to this letter provides the FPL response to Balance of Plant (BOP) RAI-5 contained in Reference 5 and BOP RAI-5.1 contained in Reference 6, as well as, RAI-5 in Reference 7.

The Reference 1 application proposed to revise the UHS water temperature limit from 100°F to 104°F with consideration for instrument uncertainty, and added a SR to increase the frequency of verifying UHS water temperature to at least once every 6 hours when water temperature exceeds 100°F. Reference 4 supplemented the application by revising the proposed wording in the SRs to be consistent with the Limiting Condition for Operation, increasing the proposed frequency of verifying UHS water temperature to at least once per hour when water temperature exceeds 100°F, and adding a requirement to the SRs to add instrument uncertainty to the indicated value. This supplement removes the proposed requirement in TS SR 4.7.4 to add instrument uncertainty to the indicated value of UHS temperature. This supplement also proposes a change to the frequency of performing the CCW heat exchanger performance test from at least once per 31 days to at least once per 14 days.

Enclosure 1 supplements the Reference 1 application, as supplemented by Reference 4, and includes a mark-up of TS 3/4.7.4, Ultimate Heat Sink, in response to NRC BOP RAIs 5 and 5.1. Enclosure 1 also includes a mark-up of TS SR 4.7.2.b in response to NRC RAI-5.

Because the proposed change to TS SR 4.7.2.b is added to the scope of the original application, a supplement to the determination of no significant hazards and the environmental considerations is also provided in Enclosure 1.

There are no new commitments made in this submission.

The Turkey Point Plant Nuclear Safety Committee has reviewed and approved this supplement to the license amendment application. In accordance with 10 CFR 50.91(b)(1), a copy of this letter is being forwarded to the State Designee of Florida.

If you have any questions or require additional information, please contact Mr. Robert Tomonto at 305-246-7327.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 29, 2014.

Very truly yours,



Michael Kiley  
Vice President - Turkey Point Nuclear Plant

- Enclosures:
1. Supplement to Application to Revise Ultimate Heat Sink Temperature Limit
  2. Response to BOP Request for Additional Information (RAI) Nos. 5 and 5.1, and RAI-5

cc: USNRC Regional Administrator, Region II  
USNRC Project Manager, Turkey Point Nuclear Plant  
USNRC Senior Resident Inspector, Turkey Point Nuclear Plant  
Ms. Cindy Becker, Florida Department of Health

**Turkey Point Units 3 and 4**  
**License Amendment Request No. 231**  
**Supplement 2**  
**Application to Revise Ultimate Heat Sink Temperature Limit**  
**and**  
**Increase Component Cooling Water Heat Exchanger Performance Test Frequency**  
**Enclosure 1**

1. Description
2. Proposed Change
3. Discussion of Change to the Application
4. Regulatory Analysis
5. Environmental Consideration
6. References

Attachments

1. Proposed Technical Specification Pages 3/4 7-15 and 3/4 7-17 Mark-up
2. Change to Technical Specification Bases 3/4.7.4 Mark-Up

## 1.0 Description

Florida Power & Light Company (FPL) amends the application (Reference 1), as supplemented by Reference 2, to revise the ultimate heat sink (UHS) temperature limit. With this supplement FPL is revising a proposed change to the Surveillance Requirements (SR) for Technical Specification (TS) 3/4.7.4, Ultimate Heat Sink. In addition, FPL is proposing to revise Component Cooling Water (CCW) system TS SR 4.7.2.b(2) in response to the U.S. Nuclear Regulatory Commission (NRC) staff's request for additional information (RAI) 5 contained in Reference 3.

## 2.0 Proposed Change

This application supplement revises the proposed wording in the SRs to be consistent with the Limiting Condition for Operation (LCO) in TS 3/4.7.4, Ultimate Heat Sink, increases the proposed frequency of verifying UHS water temperature when water temperature exceeds 100°F, and deletes the proposed requirement to the SRs to add instrument uncertainty to the indicated value. Sections 2.1 and 2.2 below update those same sections contained in the Reference 1 application, and as supplemented by Reference 2. In addition, FPL is proposing an increased frequency for the CCW system heat exchanger performance test required by TS SR 4.7.2.b(2) to at least once per 14 days in response to the NRC staff's RAI-5 contained in Reference 3. Sections 2.3 and 2.4 below discuss current CCW SR 4.7.2.b(2) and the proposed change.

### 2.1 Current TS and Bases

Current TS 3/4.7.4, addresses UHS system operability by requiring that the average supply temperature to the Intake Cooling Water (ICW) system be within specified limits:

LCO 3.7.4 states:

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

APPLICABILITY is:

MODES 1, 2, 3, and 4.

The ACTION states:

With the requirements of the above specification not satisfied, be in at least HOT STANDBY within 12 hours and In COLD SHUTDOWN within the following 30 hours. This ACTION shall be applicable to both units simultaneously.

SR 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 be within its limit.

The asterisk (\*) refers to a footnote that reads:

Portable monitors may be used to measure the temperature.

TS Bases

The limit on Ultimate Heat Sink (UHS) temperature in conjunction with the SURVEILLANCE REQUIREMENTS of Technical Specification 3/4.7.2 will ensure that sufficient cooling capacity is available either: (1) To provide normal cool down of the facility, or (2) To mitigate the effects of accident conditions within acceptable limits.

FPL has the option of monitoring the 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 but prior to 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 low ICW head and high water volume. Accordingly, monitoring the UHS temperature after the ICW Pumps but prior to the CCW Heat Exchangers provides an equivalent location for monitoring the UHS temperature.

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 temperatures greater than 100°F. Therefore, an upper TS limit of 100°F is conservative.

## 2.2 Proposed TS and Bases Changes

The proposed revision to TS 3/4.7.4:

LCO 3.7.4 would state:

The ultimate heat sink shall be OPERABLE with an average supply water temperature less than or equal to 104°F.

APPLICABILITY remains unchanged; however, an administrative change is included to correct a typographical error. Punctuation periods were incorporated after the numbers 1 and 3 in prior amendments. The periods are now replaced by commas reflecting correct punctuation usage. This is an administrative change that does not alter the required action. The typographical error was introduced when FPL provided the NRC retyped pages for License Amendments 260 and 255.

ACTION required remains unchanged except for the correction of a typographical error. The capitalized word 'In' before the words 'COLD SHUTDOWN' is properly reduced to lower case because it is not at the beginning of the sentence. This is an administrative change that does not alter the required action. The typographical error was introduced when FPL provided the NRC retyped pages for License Amendments 260 and 255.

Current SR 4.7.4 would be revised as follows:

4.7.4 The ultimate heat sink shall be determined OPERABLE:

a. At least once per 24 hours by verifying the average supply water temperature\* is less than or equal to 104°F.

SR 4.7.4.b would be added:

b. At least once per hour by verifying the average supply water temperature\* is less than or equal to 104°F, when water temperature exceeds 100°F.

The asterisk (\*) refers to a footnote that remains unchanged.

The wording in SRs 4.7.4.a and 4.7.4.b is revised to be consistent with the LCO when referring to the LCO limit as being 'less than or equal to.'

A mark-up of the proposed TS revision is contained in Attachment 1 (Page 3/4 7-17).

The current TS bases above will be supplemented with the following two paragraphs:

Verifying UHS water temperature at least once per 24 hours is adequate to ensure the limit of 104°F is not exceeded when the water temperature is less than 100°F as there is ample ( $\geq 4^\circ\text{F}$ ) margin to the limit. Due to daily variations in temperature, when UHS water temperature exceeds 100°F the water temperature shall be verified at least once per hour to ensure that cooling canal system temperature variations are appropriately captured thus ensuring the Technical Specification limit is not exceeded.



For the verification of UHS average supply water temperature, an appropriate instrument uncertainty will be subtracted from the acceptance criteria to ensure the Technical Specification limit is not exceeded.

A mark-up of the TS bases revision is contained in Attachment 2.

### 2.3 Current TS SR 4.7.2.b(2) and CCW System TS Bases

TS SR 4.7.2.b(2) is part of TS SR 4.7.2.b which states:

- 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.\*

The asterisk (\*) refers to a footnote that reads:

\*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.

### TS Bases

The OPERABILITY of the Component Cooling Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single active failure, is consistent with the assumptions used in the safety analyses. One pump and two heat exchangers provide the heat removal capability for accidents that have been analyzed.

### 2.4 Proposed TS SR 4.7.2.b.2

TS SR 4.7.2.b is separated into two parts. TS SR 4.7.2.b(1) would become TS SR 4.7.2.b.1 and the requirement remains the same. TS SR 4.7.2.b(2) would become TS SR 4.7.2.b.2 and the frequency of performing the CCW heat exchanger performance test at least once per 31 days would be revised to at least once per 14 days. The proposed change is as follows:

- b.
  - 1) At least once per 31 days verify 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.
  - 2) At least once per 14 days verify by a performance test the heat exchanger surveillance curves.\*

The asterisk (\*) refers to a footnote that would require a minor editorial change to ensure consistency with the revised format of TS SR 4.7.2.b. The parentheses around the '2' in 4.7.2.b(2) are removed and the 'b' and '2' would be separated by a period. The footnote would read:

\*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.

A mark-up of the proposed TS revision is contained in Attachment 1 (Page 3/4 7-15).

No changes to the TS bases for the CCW system are planned as a result of the application.

### 3.0 Discussion of Change to the Application

The Reference 1 application proposed to revise the UHS water temperature limit from 100°F to 104°F with consideration for instrument uncertainty. FPL proposed revised changes in Reference 2 concerning the SRs. This supplement revises the proposed SR with the sum total of the changes described in Section 2.2 above. The differences from the Reference 1 application and the Reference 2 supplement are discussed below.

The wording in SRs 4.7.4.a and 4.7.4.b is revised to be consistent with the LCO when referring to the LCO limit as being 'less than or equal to.'

New TS SR 4.7.4.b is proposed that will increase the frequency of monitoring UHS temperature when water temperature exceeds 100°F to at least once per hour. This increased frequency ensures that cooling canal system temperature variations are appropriately captured. The frequency is based on experience with temperature trends over the course of each day.

The proposed (\*\*) footnote (proposed in Reference 2) is deleted and the requirement to ensure instrument uncertainty is reflected in the verification of UHS average supply water temperature for ensuring compliance with the LCO is discussed in the bases (Attachment 2). This change is in response to Balance of Plant RAI-5.1 (see Enclosure 2).

The change to the requested revisions to TS 3/4.7.4 contained in this supplement would provide additional restrictions on the verification of UHS water temperature. These revisions to the proposed SRs do not alter the bases in the technical evaluation contained in the Reference 1 application. FPL concluded therein that safe operation of both Turkey Point units would be assured with UHS water temperature up to 104°F. The conclusion derived from those analyses remains unchanged and bounds the revised request discussed herein.

The revision to the changes requested for TS 3/4.7.4 in this supplement do not alter the determination of no significant hazards and the evaluation performed in the NRC's Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) dated July 28, 2014, because the revised request is bounded by the basis for change to a higher UHS temperature limit contained in the application, and the proposed changes to the TS SRs provide additional restrictions on verifying compliance with the UHS water temperature limit.

The proposed change to TS SR 4.7.2.b(2) is an additional restriction (increased frequency) for performing the CCW heat exchanger performance test. This proposed change is in response to RAI-5 (see Enclosure 2). Because the proposed change to TS SR 4.7.2.b(2) is added to the scope of the original application, a supplement to the determination of no significant hazards and the environmental considerations is addressed below for the change to TS SR 4.7.2.b(2) only.

#### 4.0 Regulatory Analysis

10 CFR 50.91 (a)(1) requires that licensee requests for operating license amendments be accompanied by an evaluation of significant hazards posed by the issuance of the amendment. FPL has evaluated this proposed supplement to the amendment with respect to the criteria given in 10 CFR 50.92(c).

The addition of the proposed change to TS SR 4.7.2.b(2) is a change in scope from the original application. The proposed change would increase the frequency of performing the CCW heat exchanger performance test from at least once per 31 days to at least once per 14 days. This change is an additional restriction placed on the performance of the test and does not relax or relieve any existing requirements.

FPL has evaluated whether or not a significant hazards consideration is involved with the proposed change to TS SR 4.7.2.b(2). A discussion of these standards as they relate to this change request is provided below:

#### 4.1 No Significant Hazards Consideration Evaluation

- 4.1.1 Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

Testing a CCW heat exchanger is not an accident initiator. An increase in the frequency of performing the CCW heat exchanger performance test will not increase the probability of occurrence of an accident. The proposed change will be an increase in the monitoring of CCW heat exchanger capability to remove heat during normal and accident conditions to support both reactor and containment heat removal requirements, and spent fuel cooling requirements. Maintaining CCW heat exchanger capability ensures that accident mitigation equipment will continue to perform its required function, thereby ensuring the consequences of accidents previously evaluated are not increased. Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

- 4.1.2 Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed change will not install any new or different equipment or modify equipment in the plant. The proposed change will not alter the operation or function of structures, systems or components. The response of the plant and the operators following a design basis accident is unaffected by this change. The proposed change does not introduce any new failure modes and the design basis heat removal capability of the safety related components is maintained and ensured by more frequently verifying CCW heat exchanger capability. Therefore, the proposed change will not create the possibility of a new or different kind of accident from any previously evaluated.

- 4.1.3 Does the proposed change involve a significant reduction in the margin of safety?

Response: No

An increase in the frequency of performing the CCW heat exchanger performance test does not affect design basis accident mitigation equipment performance. Increasing the frequency of performance of the existing test has no impact on the margin of safety associated with the CCW system or any system that it serves. The test confirms the capability of the CCW system to perform its safety function. Therefore, the proposed change does not involve a significant reduction in the margin of safety.

#### Conclusion

Based on the above, FPL concludes that this supplement to the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of no significant hazards consideration is justified.

#### 5.0 Environmental Consideration

The changes to the license amendment request associated with this supplement do not affect the evaluation in the NRC's EA and FONSI dated July 28, 2014. The changes associated with this supplement would not result in or require any physical changes to Turkey Point systems, structures, or components, including those intended for the prevention of accidents. The supplemental changes continue to involve TS changes that would only result in changes in procedural and operational aspects undertaken by FPL personnel for monitoring and maintaining the UHS temperature limit and CCW heat exchanger performance capability. Further, these changes do not alter the new temperature limit proposed in FPL's license amendment request as discussed in the NRC's EA and FONSI. As a result, the conclusions reached in the NRC's EA and FONSI remain applicable.

#### 6.0 References

1. Florida Power & Light Company (FPL) Letter L-2014-216, "License Amendment Request No. 231, Application to Revise Technical Specifications to Revise Ultimate Heat Sink Temperature Limit," dated July 10, 2014
2. Florida Power & Light Company Letter L-2014-235, "License Amendment Request No. 231, Application to Revise Ultimate Heat Sink Temperature Limit – Supplement 1, and Response to Request for Additional Information," dated July 22, 2014.
3. Email from A. Klett (NRC) to R. Tomonto, et al. (FPL), "Turkey Point 3 and 4 Request for Additional Information - LAR 231 (TACs MF4392 and MF4393)," dated July 26, 2014.

**Enclosure 1**

**Attachment 1**

**Turkey Point Units 3 and 4**

**License Amendment Request No. 231- Supplement 2**

**Proposed Changes to Technical Specifications 3/4.7.2 and 3/4.7.4**

**Page 3/4 7-15 Mark-Up**

**Page 3/4 7-17 Mark-Up**

**(two pages follow)**

SURVEILLANCE REQUIREMENTS (Continued)

- 1) 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.
- 2) At least once per 14 days verify by a performance test the heat exchanger surveillance curves.\*

\*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.

PLANT SYSTEMS

3/4.7.4 ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

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

APPLICABILITY: MODES 1- 2, 3- and 4.

ACTION:

With the requirements of the above specification not satisfied, be in at least HOT STANDBY within 12 hours and in COLD SHUTDOWN within the following 30 hours. This ACTION shall be applicable to both units simultaneously.

SURVEILLANCE REQUIREMENTS

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.

← a. At least once per 24 hours by verifying the average supply water temperature\* is less than or equal to 104°F.

← b. At least once per hour by verifying the average supply water temperature\* is less than or equal to 104°F, when water temperature exceeds 100°F.

\*Portable monitors may be used to measure the temperature.



**Enclosure 1**

**Attachment 2**

**Turkey Point Units 3 and 4**

**License Amendment Request No. 231- Supplement 2**

**Change to Technical Specification Bases 3/4.7.4**

**Mark-Up**  
**(three pages follow)**

REVISION NO.: 10	PROCEDURE TITLE: TECHNICAL SPECIFICATION BASES CONTROL PROGRAM	PAGE: 147 of 192
PROCEDURE NO.: 0-ADM-536	TURKEY POINT PLANT	

**ATTACHMENT 2**  
**Technical Specification Bases**  
(Page 131 of 176)

**3/4.7.2 Component Cooling Water System**

The OPERABILITY of the Component Cooling Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single active failure, is consistent with the assumptions used in the safety analyses. One pump and two heat exchangers provide the heat removal capability for accidents that have been analyzed.

**3/4.7.3 Intake Cooling Water System**

The OPERABILITY of the Intake Cooling Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The design and operation of this system, assuming a single active failure, ensures cooling capacity consistent with the assumptions used in the safety analyses.

**3/4.7.4 Ultimate Heat Sink**

The limit on Ultimate Heat Sink (UHS) temperature in conjunction with the SURVEILLANCE REQUIREMENTS of Technical Specification 3/4.7.2 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.

FPL has the option of monitoring the 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 but prior to CCW Heat Exchangers is considered to be equivalent to Pumps 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 low ICW head and high water volume. Accordingly, monitoring the UHS temperature after the ICW Pumps but prior to the CCW Heat Exchangers provides an equivalent location for monitoring the UHS temperature.

lower case

REVISION NO.: 10	PROCEDURE TITLE: TECHNICAL SPECIFICATION BASES CONTROL PROGRAM	PAGE: 148 of 192
PROCEDURE NO.: 0-ADM-536	TURKEY POINT PLANT	

**ATTACHMENT 2**  
**Technical Specification Bases**  
(Page 132 of 176)

3/4.7.4 (Continued)

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 temperatures greater than 100°F. Therefore, an upper Technical Specification limit of 100°F is conservative.

4

4

4

← **Insert A**

3/4.7.5 Control Room Emergency Ventilation System

The OPERABILITY of the Control Room Emergency Ventilation System (CREVS) ensures that: (1) The ambient air temperature does **NOT** exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system, and (2) The Control Room envelope (CRE) will remain habitable for occupants during and following an uncontrolled release of radioactivity, hazardous chemicals, or smoke. The OPERABILITY of this system in conjunction with Control Room design provisions is based on limiting the radiation exposure to personnel occupying the CRE to 5 rem Total Effective Dose Equivalent (TEDE) for the duration of the accident. The radiological limits are consistent with the requirements of 10 CFR Part 50.67. CRE occupants are protected from chemical hazards in accordance with the limits of Regulatory Guide 1.78.

### Insert A

Verifying UHS water temperature at least once per 24 hours is adequate to ensure the limit of 104°F is not exceeded when the water temperature is less than 100°F as there is ample ( $\geq 4^\circ\text{F}$ ) margin to the limit. Due to daily variations in temperature, when UHS water temperature exceeds 100°F the water temperature shall be verified at least once per hour to ensure that cooling canal system temperature variations are appropriately captured thus ensuring the Technical Specification limit is not exceeded.

For the verification of UHS average supply water temperature, an appropriate instrument uncertainty will be subtracted from the acceptance criteria to ensure the Technical Specification limit is not exceeded.

**Enclosure 2**

**Turkey Point Units 3 and 4**

**License Amendment Request No. 231**

**Response to Request for Additional Information (RAI)**

**RAI-5**

**and**

**Balance of Plant RAIs 5 and 5.1**

**Turkey Point Units 3 and 4  
License Amendment Request No. 231**

**Response to Request for Additional Information (RAI)  
RAI-5  
and  
Balance of Plant RAI 5 and 5.1**

**Enclosure 2**

By letter dated July 10, 2014, as supplemented by letters dated July 17, July 22, and July 24, 2014, Florida Power & Light Company (FPL) submitted a license amendment request for the Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point). FPL requested revisions to the Turkey Point Technical Specifications (TSs), Section 3/4.7.4, "Ultimate Heat Sink."

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the information provided by FPL and determined that it needs additional information to complete the review. The NRC staff's request for additional information (RAI) was provided to FPL in References 1, 2 and 4 and the FPL response to RAI-5 and Balance of Plant (BOP) RAIs 5 and 5.1 is as follows.

**RAI-5**

The frequency of Surveillance Requirement (SR) 4.7.2 b. (2) is 31 days for verifying by performance test the heat exchanger surveillance curves. This SR is combined with SR 4.7.2 a. to determine when a component cooling water heat exchanger requires cleaning. The licensee has performed this SR once or twice weekly during the period of high algae concentration and the Notice of Enforcement Discretion period because the need to verify when to clean has been more frequent even during normal UHS conditions. The licensee believed there was a need to perform this SR more often than when the adverse algae conditions did not exist.

The NRC staff considers that the frequency of SR 4.7.2 b.(2) should be increased on a permanent basis to no more than every 14 days. Please change the frequency of this SR accordingly, or provide adequate justification that the SR would continue to meet the requirements of 10 CFR 50.36(c)(3) with the current frequency.

**FPL Response**

FPL has revised the application, as discussed in Sections 2.4 and 3.0 of Enclosure 1 in this correspondence, to increase the frequency of performing the Component Cooling Water heat exchanger performance test to at least once per 14 days. The proposed change is shown in marked-up TS page 3/4 7-15 in Attachment 1 of Enclosure 1.

## **BOP RAI-5**

The licensee stated that the proposed TS change increases the maximum allowable UHS temperature for operation of Units 3 and 4. Adoption of the proposed TS change would allow continued plant operation provided the measured UHS/ICW temperature does not exceed 104°F. The maximum allowable canal temperature would be 104°F (analytical limit) minus the measurement instrument uncertainty.

The licensee uses the analytical limit as the TS measured limit, which does not account for measurement instrument uncertainty. Therefore, the actual UHS/ICW temperature may be greater than 104°F. Justify or correct the proposed TSs.

### **FPL Response**

In Reference 2, the NRC staff amended BOP RAI-5 and, in effect, it has been superseded. FPL addressed BOP RAI-5 via the proposed change to add footnote (\*\*\*) as discussed in Reference 3.

## **BOP RAI-5.1**

The NRC staff prefers that the proposed footnote for TS 3/4.7.4 that states, “\*\*\*Instrument uncertainty shall be added to the indicated value[,]” be removed from the proposed TS; rather, the NRC staff prefers that a description of how the licensee accounts for such instrument uncertainty be added to the TS Bases. Please indicate whether the licensee will update its application to include this approach. This RAI supersedes the “Justify or correct the proposed TSs” statement in BOP RAI-5.

### **FPL Response**

As shown in Section 2.2 and discussed in Section 3.0 of Enclosure 1 in this correspondence and as shown in marked-up TS page 3/4 7-17 in Attachment 1 of Enclosure 1, the (\*\*\*) footnote is now deleted from the proposed SRs. The requirement to include instrument uncertainty in verifying UHS average supply water temperature is discussed in the TS bases as shown in the mark-up in Attachment 2 of Enclosure 1.

### **References**

1. Email from A. Klett (NRC) to R. Tomonto, et al. (FPL), “Turkey Point 3 and 4 Request for Additional Information - LAR 231 (TACs MF4392 and MF4393),” dated July 21, 2014 (BOP RAIs).

2. Email from A. Klett (NRC) to R. Tomonto, et al. (FPL), "Turkey Point 3 and 4 Request for Additional Information - LAR 231 (TACs MF4392 and MF4393)," dated July 25, 2014 (BOP RAIs 5.1 and 6, SCVB RAI 3).
3. Florida Power & Light Company Letter L-2014-235, "License Amendment Request No. 231, Application to Revise Ultimate Heat Sink Temperature Limit – Supplement 1, and Response to Request for Additional Information," dated July 22, 2014.
4. Email from A. Klett (NRC) to R. Tomonto, et al. (FPL), "Turkey Point 3 and 4 Request for Additional Information - LAR 231 (TACs MF4392 and MF4393)," dated July 26, 2014.