

Docket No. 50-382

May 9, 1994

Mr. Ross P. Barkhurst
Vice President Operations
Entergy Operations, Inc.
Post Office Box B
Killona, Louisiana 70066

Dear Mr. Barkhurst:

SUBJECT: ISSUANCE OF AMENDMENT NO. 95 TO FACILITY OPERATING LICENSE
NPF-38 - WATERFORD STEAM ELECTRIC STATION, UNIT 3 (TAC NO. M87798)

The Commission has issued the enclosed Amendment No. 95 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated September 16, 1993.

The amendment changes the Appendix A Technical Specifications for the ultimate heat sink (UHS) to clarify the requirements for the wet cooling tower fan covers, increase the test interval for starting the dry and wet tower fans from 7 days to 31 days, increase the wet bulb temperature to 80 degrees F for determining Operability, and make other editorial and clarifying changes.

A copy of our related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY:
David L. Wigginton, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 95 to NPF-38
- 2. Safety Evaluation

cc w/enclosures:

See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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A copy of our related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

A handwritten signature in cursive script, appearing to read "D. Wigginton".

David L. Wigginton, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 95 to NPF-38
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Ross P. Barkhurst
Entergy Operations, Inc.

Waterford 3

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ENERGY OPERATIONS, INC.

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 95
License No. NPF-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated September 16, 1993, 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.

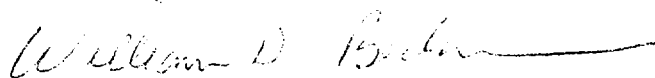
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-38 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 95, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in 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.

FOR THE NUCLEAR REGULATORY COMMISSION



William D. Beckner, Director
Project Directorate IV-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 9, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 95
TO FACILITY OPERATING LICENSE NO. NPF-38
DOCKET NO. 50-382

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE PAGES

3/4 7-12
3/4 7-13
3/4 7-14
B 3/4 7-4
-

INSERT PAGES

3/4 7-12
3/4 7-13
3/4 7-14
B 3/4 7-4
B 3/4 7-4a

PLANT SYSTEMS

3/4.7.3 COMPONENT COOLING WATER AND AUXILIARY COMPONENT COOLING WATER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.3 At least two independent component cooling water and associated auxiliary component cooling water trains shall be OPERABLE.

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

ACTION:

With only one component cooling water and associated auxiliary component cooling water train OPERABLE, restore at least two trains to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.3 Each component cooling water and associated auxiliary component cooling water train shall be demonstrated OPERABLE:

- a. At least once per 31 days by 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.
- b. At least once per 18 months, during shutdown, by verifying that each automatic valve servicing safety-related equipment actuates to its correct position on SIAS and CSAS test signals.
- c. At least once per 18 months by verifying that each component cooling water and associated auxiliary component cooling water pump starts automatically on an SIAS test signal.

PLANT SYSTEMS

3/4.7.4 ULTIMATE HEAT SINK

LIMITING CONDITION FOR OPERATION

3.7.4 Two independent trains of ultimate heat sink cooling towers shall be OPERABLE with each train consisting of a dry cooling tower (DCT) and a wet mechanical draft cooling tower and its associated water basin with:

- a. A minimum water level in each wet tower basin of 97% (-9.86 ft MSL)
- b. An average basin water temperature of less than or equal to 95°F.
- c. Fans as required by Table 3.7-3.

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

ACTION:

- a. With one wet mechanical draft cooling tower inoperable due to low water level and/or high average water temperature, restore the wet mechanical draft cooling tower to OPERABLE status within 72 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With both wet mechanical draft cooling towers inoperable due to low water level and/or high average water temperature, restore at least one wet mechanical draft cooling tower to OPERABLE status within 1 hour and restore both wet mechanical draft cooling towers to OPERABLE status within 72 hours of initial loss, otherwise be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- c. With the number of OPERABLE fans less than required by Table 3.7-3 on one DCT/WCT train, restore the number of OPERABLE fans to within the requirements of Table 3.7-3 within 72 hours (except as specified in Action e.), or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. With the number of OPERABLE fans less than required by Table 3.7-3 on both DCT/WCT trains, restore the number of OPERABLE fans to within the requirements of Table 3.7-3 for 1 DCT/WCT train within 1 hour and comply with ACTION c. (except as specified in ACTION e.), or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

PLANT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

- e. With a Tornado Watch in effect, and the number of fans OPERABLE within the missile protected area of a DCT less than that required by Table 3.7.3, restore the inoperable fan(s) to OPERABLE status within 1 hour, or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.
- f. With more than one fan inoperable and the outside air temperature greater than 70°F, determine the dry bulb temperature at least once every 2 hours. If the temperature is $\geq 80^\circ\text{F}$, determine the wet bulb temperature and verify that the minimum fan requirements of Table 3.7-3 are satisfied.

SURVEILLANCE REQUIREMENTS

- 4.7.4. Each train of ultimate heat sink shall be determined OPERABLE:
- a. At least once per 24 hours by verifying the average water temperature and water level to be within their limits.
 - b. At least once per 31 days, by verifying that each wet tower and dry tower fan that is not already running, starts and operates for at least 15 minutes.

TABLE 3.7-3

ULTIMATE HEAT SINK MINIMUM FAN REQUIREMENTS

AMBIENT CONDITION	DRY BULB \geq 90°F ¹ OR WET BULB \geq 81°F	80°F \leq DRY BULB < 90°F AND WET BULB < 81°F	DRY BULB < 80°F
Fan Requirements ⁽¹⁾	14 DCT*** and 8 WCT	12 DCT*** and 4 WCT*	9 DCT** and 4 WCT*
	OR		
	15 DCT and 7 WCT*		

NOTE: With more than one fan inoperable comply with ACTION f.

(1) All fans of a dry cooling tower section are inoperable if component cooling water is secured to that section.

- * With any WCT fan(s) out-of-service in any cell, covers must be in place on the out-of-service fan(s) or the entire cell (i.e. 4 fans) declared out-of-service.
- ** With a tornado watch in effect, at least 8 of the DCT fans under the missile protected portion of the DCT shall be OPERABLE.
- *** With a tornado watch in effect, all 9 DCT fans under the missile protected portion of the DCT shall be OPERABLE.

PLANT SYSTEMS

BASES

3/4.7.1.4 ACTIVITY

The limitations on secondary system specific activity ensure that the resultant offsite radiation dose will be limited to a small fraction of 10 CFR Part 100 limits in the event of a steam line rupture. This dose also includes the effects of a coincident 1 gpm primary to secondary tube leak in the steam generator of the affected steam line and a concurrent loss-of-offsite electrical power. These values are consistent with the assumptions used in the safety analyses.

3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVE

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blow down in the event of a steam line rupture. This restriction is required to (1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and (2) limit the pressure rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam isolation valves within the closure times of the Surveillance Requirements are consistent with the assumptions used in the safety analyses.

3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

The limitation on steam generator secondary pressure and temperature ensures that the pressure induced stresses in the steam generators do not exceed the maximum allowable fracture toughness stress limits. The limitation to 115°F and 210 psig is based on a steam generator RT_{NDT} of 40°F and is sufficient to prevent brittle fracture. Below this temperature of 115°F the system pressure must be limited to a maximum of 20% of the secondary hydrostatic test pressure of 1375 psia (corrected for instrument error). Should steam generator temperature drop below 115°F an engineering evaluation of the effects of the overpressurization is required. However, to reduce the potential for brittle failure the steam generator temperature may be increased to a limit of 200°F while performing the evaluation. The limitations on the primary side of the steam generator are bounded by the restrictions on the reactor coolant system in Specification 3.4.8.1.

3/4.7.3 COMPONENT COOLING WATER AND AUXILIARY COMPONENT COOLING WATER SYSTEMS

The OPERABILITY of the component cooling water system and its corresponding auxiliary 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 these systems, assuming a single failure, is consistent with the assumptions used in the safety analyses.

PLANT SYSTEMS

BASES

3/4.7.4 ULTIMATE HEAT SINK

The limitations on the ultimate heat sink level, temperature, and number of fans ensure that sufficient cooling capacity is available to either (1) provide normal cooldown of the facility, or (2) to mitigate the effects of accident conditions within acceptable limits.

The UHS consists of two dry cooling towers (DCTs), two wet cooling towers (WCTs), and water stored in WCT basins. Each of two 100 percent capacity loops employs a dry and wet cooling tower.

Each DCT consists of five separate cells. Cooling air for each cell is provided by 3 fans, for a total of 15 per DCT. The cooling coils on three cells of each DCT (i.e. 60%) are protected from tornado missiles by grating located above the coils and capable of withstanding tornado missile impact. With a Tornado Watch in effect and the number of fans OPERABLE within the missile protected area of a DCT less than that required by Table 3.7-3, ACTION e requires the restoration of inoperable fans within 1 hour or plant shutdown as specified. This ACTION is based on FSAR analysis (subsection 9.2.5.3.3) that assumes the worst case single failure as, 1 emergency diesel generator coincident with a loss of offsite power. This failure occurs subsequent to a tornado strike and 60% cooling capacity of a DCT is assumed available.

Each WCT has a basin which is capable of storing sufficient water to bring the plant to safe shutdown under all accident conditions. Item a of LCO 3/4.7.4 requires a minimum water level in each WCT basin of 97% (-9.86 ft MSL). The bases for this elevation is WCT water evaporation and drift loss calculations, which concluded that during a LOCA 173,930 gallons would be evaporated from one WCT basin. When the WCT basin water level is maintained at -9.86 ft MSL, each basin has a minimum capacity of 174,000 gallons. Each WCT consists of two cells, each cell is serviced by 4 induced draft fans, for a total of 8 per WCT. There is a concrete partition between the cells that prevents air recirculation between the fans of each cell. Covers are required on fans declared out-of-service to prevent air recirculation between fans within a cell.

Table 3.7-3 specifies increased or decreased fan OPERABILITY requirements based on outside air temperature and humidity. Because temperature and humidity are subject to change during the day, ACTION f requires periodic temperature readings to verify compliance with Table 3.7-3 when more than 1 fan is inoperable. When outside air temperature (DRY BULB) is $\geq 80^{\circ}\text{F}$, WET BULB readings are necessary to ensure increased OPERABILITY requirements are met when WET BULB \geq is 81°F .

The limitations on minimum water level and maximum temperature are based on providing a 30-day cooling water supply to safety-related equipment without exceeding their design basis temperature and is consistent with the recommendations of Regulatory Guide 1.27, "Ultimate Heat Sink for Nuclear Plants," March 1974.

PLANT SYSTEMS

BASES

3/4.7.5 FLOOD PROTECTION

The limitation on flood protection ensures that facility protective actions will be taken in the event of flood conditions. The limit of elevation 27.0 ft Mean Sea Level is based on the maximum elevation at which the levee provides protection, the nuclear plant island structure provides protection to safety-related equipment up to elevation +30 ft Mean Sea Level.

3/4.7.6 CONTROL ROOM AIR CONDITIONING SYSTEM

The OPERABILITY of the control room air conditioning system 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 will remain habitable for operations personnel during and following all credible accident conditions. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less wholebody, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 of Appendix A, 10 CFR Part 50.

Operation of the system with the heaters on for at least 10 hours continuous over a 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. Obtaining and analyzing charcoal samples after 720 hours of adsorber operation (since the last sample and analysis) ensures that the adsorber maintains the efficiency assumed in the safety analysis and is consistent with Regulatory Guide 1.52.

System design is such that a Control Room Air Handling Unit and Emergency Filtration Unit in opposite trains can be credited for system operability.* In addition, the function of the heating coils in each Control Room Air Handling train is to provide personnel comfort during normal operation. During emergency conditions low temperatures in the service areas are no concern; therefore, the heaters provide no safety function and are not required for system operability.

3/4.7.7 CONTROLLED VENTILATION AREA SYSTEM

The OPERABILITY of the controlled ventilation area system ensures that radioactive materials leaking from the penetration area or the ECCS equipment within the pump room following a LOCA are filtered prior to reaching the environment. The operation of this system and the resultant effect on offsite dosage calculations was assumed in the safety analyses.

*Effective for 6 months beginning August 9, 1988.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 95 TO

FACILITY OPERATING LICENSE NO. NPF-38

ENERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By letter dated September 16, 1993, Entergy Operations, Inc. (the licensee) requested an amendment to the ultimate heat sink technical specification (TS) for the Waterford Steam Electric Station, Unit No. 3. The amendment request proposes a revision of TS Section 3/4.7.4 by adding operating conditions and limiting conditions for operation for the forced draft dry cooling towers and the mechanical draft wet cooling towers. The bases for this TS section are also being revised to support the proposed changes.

The changes to TS 3/4.7.4 "Ultimate Heat Sink" resulted from NRC Inspection Report 50-382/93-07 dated May 4, 1993, which discussed a problem with the specified requirements for the wet cooling tower fan covers. The licensee conducted a review of the ultimate heat sink TSs which resulted in other problems with TS 3/4.7.4 being identified. This amendment request includes changes and additions identified in the review which are associated with the ultimate heat sink systems.

2.0 DISCUSSION

The ultimate heat sink, consisting of two 100 percent capacity loops with each loop including a separate dry and a wet cooling tower, is designed to dissipate the heat removed from the reactor and its auxiliaries during normal unit operation, during refueling, or after a design basis accident. The wet cooling towers have water stored in the wet cooling tower basins and the entire ultimate heat sink and systems are located within the nuclear island.

The dry cooling towers (DCTs) are the primary heat sink for the component cooling water system (CCWS) during normal operation. Each DCT has been sized to dissipate to the atmosphere approximately 60% of the heat removed by the CCWS after a loss-of-coolant accident (LOCA) assuming the historically highest ambient dry bulb temperature (102°F). Each dry cooling tower consists of five separate cells, each cell containing two 40 ft long vertical cooling coils arranged in a "V" shape. Cooling air for each cell is provided by three fans, for a total of 15 fans per DCT. The cooling coils on three cells of each DCT are protected from tornado missiles by grating located above the coils. Dry

cooling tower fans and motors are located below grade, and are protected from tornado missiles by building walls and/or access platforms. The motor control centers and the transformers for the dry and wet cooling towers are protected from tornado missiles by grating capable of withstanding tornado missile impact. The dry cooling tower fans are started and shutoff automatically to maintain the CCWS temperature at 90°F.

The wet cooling towers (WCTs) remove heat from the CCWS by the separate auxiliary component cooling water system (ACCWS), and are designed to operate whenever the heat rejection capacity of the CCWS is exceeded. Each WCT is sized to dissipate to the atmosphere approximately 40% of the heat removed by the CCWS after a LOCA, assuming the historically highest ambient wet bulb temperature (83°F). Unlike the DCTs, the forced air actually contacts ACCW during the heat removal process in the WCTs. The ACCWS takes water from the wet cooling tower basin, pumps it through the CCW heat exchanger where its temperature is raised, and then to the wet cooling tower for heat dissipation to the atmosphere. ACCW enters the WCT and is sprayed downward towards the basin into fill modules which separates the water into droplets. Air is drawn upward through the modules and spray area by the fans located on top of the tower. The WCT fans are started automatically whenever the water temperature in the tower basin exceeds 85°F, and shut off by the operator. Each WCT basin contains sufficient water for ultimate heat sink operation without makeup after a LOCA. There is a concrete partition between each cell of a WCT that prevents air recirculation between the fans of each cell and the two WCT basins are interconnected by a valved four inch line to allow 100 percent margin of safety for available water supply. WCTs are not required after approximately seven days following a LOCA.

The licensee has proposed changes to the technical specification governing the ultimate heat sink, TS 3.7.4 "Ultimate Heat Sink," and to Table 3.7-3 "Ultimate Heat Sink Minimum Fan Requirements." The staff has completed its review of the proposed changes as detailed in the following evaluation.

3.0 EVALUATION

The staff evaluations of each of the licensee's proposed changes to TS 3.7.4 "Ultimate Heat Sink" are as follows:

3.1 Changes to TS 3/4.7.4 Table 3.7-3 "Ultimate Heat Sink Minimum Fan Requirements."

(1) The first asterisk on Table 3.7-3 requires covers to be in place on fans in a cell that are not running. The licensee proposes to change the first asterisk on Table 3.7-3 to read:

With any WCT fan(s) out-of-service in any cell, covers must be in place on the out-of-service fan(s) or the entire cell (i.e., four fans) declared out-of-service.

Evaluation: Each WCT train consists of two cells, each cell is serviced by four induced draft fans, and each fan driven by a 30 horsepower, single

speed motor. The WCT fans draw air upward through the fill modules and spray area. With fan(s) not operating within a single cell, outside air would be drawn in through the out-of-service fan air discharge cone above the spray area, thus reducing the cell's cooling efficiency.

The staff finds the clarification more conservative in that out-of-service fans must have covers installed, and out-of-service fans that do not have covers installed will reduce the efficiency of a cell, but not the entire train. In a phone call with the licensee on January 28, 1994, the licensee stated that covers do not need to be installed on fans that are not running as those fans are operable and cycle on as required. The staff finds the change acceptable.

(2) The second asterisk on Table 3.7-3 gives the requirement on the number of DCT fans that shall be operable under the missile protected portion of the DCT with a tornado watch in effect. The licensee has proposed to change the second asterisk to read:

With a tornado watch in effect, at least 8 of the DCT fans under the missile protected portion of the DCT shall be OPERABLE.

Evaluation: The number of fans located under the missile protected portion of the DCT consists of 3 cells of 3 fans each for a total of nine fans. The staff considers this change, changing "...8 of these 9 DCT fans..." to "...8 of the DCT fans..." to be of an editorial nature that clarifies the number of fans that shall be operable under the missile protected portion of the DCT during a tornado watch. The staff finds the change acceptable.

(3) The first ambient condition on Table 3.7-3 requires 14 DCT fans and 8 WCT fans, or 15 DCT fans and 7 WCT fans. The licensee has proposed to change TS Table 3.7-3 by adding three asterisks to the "14 DCT" fan requirement in the first column of Table 3.7-3. In addition, an editorial change was made to the third asterisk on Table 3.7-3 and has been changed to read:

With a tornado watch in effect, all 9 DCT fans under the missile protected portion of the DCT shall be OPERABLE.

Evaluation: Under those specified ambient conditions, only one fan (of the total 23 DCT and WCT fans) can be inoperable, however, all fans under the missile protected portion of the DCTs must be operable. The staff finds the changes to be more conservative and clarify the requirements in Table 3.7-3, and are therefore acceptable.

(4) The licensee has proposed to add to Table 3.7-3 the following note to ensure compliance with Action "f" which is required when more than one fan is inoperable:

NOTE: With more than one fan inoperable comply with Action f.

Evaluation: The staff finds this change of an editorial nature and its inclusion into Table 3.7-3 will ensure compliance with Action "f." The staff finds the change acceptable.

(5) Change TS 3/4.7.4 Table 3.7-3 by removing the wet bulb temperature less than 76°F criteria from the third ambient condition, and retaining the dry bulb temperature less than 80°F requirement.

Evaluation: The licensee has stated in its proposal that this requirement can be removed because the wet bulb temperatures are normally lower than dry bulb temperatures and the wet bulb temperature is not a critical factor per Table 3.7-3 until the dry bulb temperature is greater than or equal to 80°F. Atmospheric wet bulb temperature affects the capacity of the WCT. Since Table 3.7-3 requires the same amount of WCT fans at wet bulb temperatures less than 81°F, reference to wet bulb temperature in the third column can be removed. The staff agrees and finds the change acceptable.

3.2 Changes to TS 3/4.7.4 Action items.

(1) Change TS 3/4.7.4 Action "e" to the following:

With a Tornado Watch in effect, and the number of fans OPERABLE within the missile protected areas of a DCT less than that required by Table 3.7-3, restore the inoperable fan(s) to OPERABLE status within 1 hour, or be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

Evaluation: The original Action "e" was in conflict with the requirement of the second asterisk on Table 3.7-3. The staff finds that changing Action "e" to reference Table 3.7-3 resolves the earlier conflict with Action "e" and Table 3.7-3 and is acceptable.

(2) Change TS 3/4.7.4 Action "c" to the following:

With the number of OPERABLE fans less than required by Table 3.7-3 on one DCT/WCT train, restore the number of OPERABLE fans to within the requirements of Table 3.7-3 within 72 hours (except as specified in Action e), or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

Evaluation: Action "d" references Action "c" by requiring compliance with Table 3.7-3 for 1 DCT/WCT train. Adding the words "on one DCT/WCT train" to Action "c" makes Action "c" consistent with Action "d." The staff finds the change acceptable.

(3) Change TS 3/4.7.4, Action "f" to the following:

With more than one fan inoperable and the outside air temperature greater than 70°F, determine the dry bulb temperature at least once every 2 hours. If the temperature is greater than or equal to 80°F, determine the wet bulb temperature and verify that the minimum fan requirements of Table 3.7-3 are satisfied.

Evaluation: Three changes have been proposed to Action "f." The first change removes any reference to the type of fan so that Action "f" requires compliance when any type of fan is inoperable and the outside air temperature is greater than 70°F. The staff finds this clarification to Action "f" to be acceptable. The second change to Action "f" increases the time requirement for determining the dry bulb temperature from one hour to two hours. The licensee has stated in its submittal that this time period is adequate with respect to safety based on the redundancy of fans and cooling tower trains available. The staff finds this change to the time period for determining the dry bulb temperature acceptable. The third proposed change revises Action "f" to require 80°F as the initiating temperature for determining wet bulb temperatures. As stated above (3.1(5)), the wet bulb temperature will normally be lower than the dry bulb temperature and the wet bulb temperature is not a critical factor per Table 3.7-3 until the dry bulb temperature is greater than or equal to 80°F. The staff agrees that the wet bulb temperature should not be a determining factor until the dry bulb temperature is greater than or equal to 80°F. The staff finds that this change is consistent with the earlier change to Table 3.7-3 and is acceptable.

3.3 Changes to TS 3/4.7.4 Surveillance Requirements

(1) Change TS 3/4.7.4 (b) by changing the frequency for verifying that each wet tower and dry tower fan that is not already running, starts and operates for at least 15 minutes from "at least once per 7 days" to "at least once per 31 days."

Evaluation: The licensee has proposed to change the surveillance requirements for testing WCT and DCT fans. Current Surveillance Requirement 4.7.4(b) requires the licensee to operate each WCT and DCT fan that is not already running once per 7 days for at least 15 minutes. The licensee has stated in its proposal that based on operating experience, the known reliability of the fan units, the redundancy available, and the low probability of significant degradation of UHS cooling tower fans, that increasing the frequency for testing the UHS cooling tower fans to 31 days will improve the reliability of the fans through reduced stresses associated with testing. The staff finds this acceptable.

3.4 Bases

(1) Change TS 3/4.7.4, BASES to reflect the changes proposed by the licensee.

Evaluation: The UHS Bases Section 3/4.7.4 have been updated to provide additional information and clarification concerning the proposed changes discussed above. The staff reviewed the revised bases and found them to be consistent with the system description and safety function presented in the final safety analysis report (FSAR). The changes to the bases section are acceptable.

3.5 Acceptance

The staff found the proposed TS additions and changes to be acceptable. The additions to the technical specifications and surveillance requirements of the

UHS were conservative in that they reflect data and operating experience gained by plant personnel, and were found to be acceptable based on the physical constraints and regulatory requirements associated with the testing.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Louisiana State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves 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 amendment involves no significant hazards consideration and there has been no public comment on such finding (58 FR 57851). Accordingly, the amendment meets 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 amendment.

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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: May 9, 1994