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December 4, 2002

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Document Control Desk

Subject: Oconee Nuclear Station
Docket Numbers 50-269, 270, and 287
License Amendment Request for Upper Surge Tank and Hotwell Inventory 3.7.6
Technical Specification Change (TSC) Number 2002-08

Pursuant to Title 10, Code of Federal Regulations, Part 50, Section 90 (10 CFR 50.90), Duke Energy (Duke) proposes to amend Appendix A, Technical Specifications, for Facility Operating Licenses DPR-38, DPR-47 and DPR-55 for Oconee Nuclear Station, Units 1, 2, and 3. Technical Specification (TS) 3.7.6, Condensate Storage Tank (CST), Upper Surge Tank (UST) and Hotwell (HW) currently requires a minimum combined inventory of 72,000 gallons for these three tanks. The proposed license amendment request (LAR) revises TS 3.7.6, to require a minimum combined inventory of 155,000 gallons for the UST and HW, and changes the title. Additionally, the proposed LAR removes credit for the CST as a source of the required inventory. This change reflects the inventory requirements specified in the Updated Final Safety Analysis Report (UFSAR), Section 10.4.7, approved by the NRC on June 11, 2002. The TS 3.7.6 requirement for a minimum of 30,000 gallons in the UST alone remains unchanged. This LAR also revises the Table of Contents to reflect the changed title of this specification.

All technical aspects of this amendment were reviewed during the review of UFSAR Section 10.4.7 and approved in the Safety Evaluation for this section dated June 11, 2002. This LAR implements the inventory requirements of the approved UFSAR section and is in conformance with the Safety Evaluation. No other changes are requested in the LAR.

The revised Technical Specification pages are included in Attachment 1. Attachment 2 contains the markup of the

A001

current Technical Specification pages. The Technical Justification for the amendment request is included in Attachment 3. Attachments 4 and 5 contain the No Significant Hazards Consideration Evaluation and the Environmental Impact Analysis, respectively.

Approval of this proposed LAR is requested by May 1, 2003. Implementation of these changes will not result in an undue risk to the health and safety of the public.

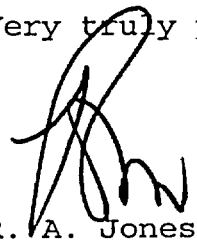
The Oconee Updated Final Safety Analysis Report has been reviewed and no changes are necessary to support this LAR.

This proposed change to the TS has been reviewed and approved by the Plant Operations Review Committee and Nuclear Safety Review Board.

Pursuant to 10 CFR 50.91, a copy of this proposed amendment is being sent to the South Carolina Department of Health and Environmental Control for review, and as deemed necessary and appropriate, subsequent consultation with the NRC staff.

If there are any additional questions, please contact Noel Clarkson at (864) 885-3077.

Very truly yours,



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R. A. Jones, being duly sworn, states that he is Vice President, Oconee Nuclear Site, Duke Energy Corporation, that he is authorized on the part of said Company to sign and file with the U. S. Nuclear Regulatory Commission this revision to the Renewed Facility Operating License Nos. DPR-38, DPR-47, DPR-55; and that all the statements and matters set forth herein are true and correct to the best of his knowledge.

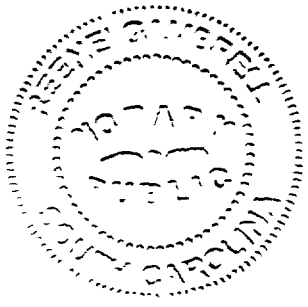
R. A. Jones, Vice President
Oconee Nuclear Site

Subscribed and sworn to before me this 4 day of December, 2002

Notary Public

My Commission Expires:

My Commission Expires Aug. 19, 2009



ATTACHMENT 1

TECHNICAL SPECIFICATION

Remove Page	Insert Page
Table of Contents iii	Table of Contents iii
Bases Table of Contents iii	Bases Table of Contents iii
3.7.6-1	3.7.6-1
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B 3.7.6-2	B 3.7.6-2
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3.7.6 Upper Surge Tank (UST) and Hotwell (HW)

LCO 3.7.6 The UST and HW shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Requirements of the LCO not met.	A.1	Be in MODE 3.	12 hours
	AND		
	A.2	Be in MODE 4 without reliance on steam generator for heat removal.	24 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.6.1	Verify combined inventory in the UST and HW is ≥ 155,000 gal. AND Inventory in the UST is ≥ 30,000 gal.	12 hours

B 3.7 PLANT SYSTEMS

B 3.7.6 Upper Surge Tank (UST) and Hotwell (HW)

BASES

BACKGROUND

The UST and HW provide a source of water to the steam generators for removing decay and sensible heat from the Reactor Coolant System (RCS). The UST and HW provide a passive flow of water to the Emergency Feedwater (EFW) System (LCO 3.7.5, "Emergency Feedwater (EFW) System"). For accident mitigation, heat removal is assumed to be through steam released to the atmosphere by the main steam safety valves and the atmospheric dump valves. However, the most likely steam flow path is to the condenser and hotwell by the non-safety grade path of the turbine bypass valves.

The emergency feedwater pumps are normally aligned to the upper surge tanks (UST). The UST provides the initial source of water for the EFW System. When that supply is exhausted, the pumps may be aligned to draw water from the hotwell. A minimum level of 6 feet (at least 30,000 gallons) is maintained in the UST to assure an adequate source of water to the EFW until other sources can be aligned. This minimum level of 6 feet includes an allowance for instrument uncertainty and depletion of inventory while transferring the EFW suction to an alternative source of water.

The UST and the piping connecting them to the EFW pumps has been analyzed and qualified to withstand a design basis seismic event. This includes piping up to the first normally closed valve. The hotwell and connected piping used for the TDEFW pump suction supply has been evaluated using a "seismic experience" approach and found capable of withstanding a seismic event. Although the evaluation methodology is not recognized for licensing basis, this secondary water supply is considered to be a "seismic assured source of water." Feedwater is also available from alternate source(s).

A description of the condensate/feedwater reserves available to the EFW System is found in the UFSAR, Section 10.4, (Ref. 1).

BASES (continued)

APPLICABLE SAFETY ANALYSES

The UST and HW provide cooling water to remove decay heat following events in the accident analysis, as discussed in the UFSAR, Chapters 10 and 15 (Refs. 2 and 3, respectively).

The required inventory in the UST and HW is based on maintaining hot standby conditions for one hour, followed by a 50°F per hour cooldown to decay heat removal entry conditions. Although the EFW system capacity is sufficient to support a 50°F per hour cooldown rate, this rate is not achievable during certain events, such as a natural circulation cooldown.

The UST and HW satisfy Criteria 2 and 3 of 10 CFR 50.36 (Ref. 4).

LCO

To satisfy LCO requirements, the UST and HW must contain the specified volume of water available to the EFW System.

The OPERABILITY of UST and HW is determined by maintaining the tank volume at or above the minimum required volume.

APPLICABILITY

In MODES 1, 2, 3, and in MODE 4, when steam generator is being relied upon for heat removal, the UST and HW are required to be OPERABLE.

In MODES 5 and 6, the UST and HW are not required because the EFW System is not required.

ACTIONS

A.1 and A.2

If the requirements of the LCO are not met, the unit must be placed in a MODE in which the LCO does not apply, with the DHR System in operation. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours, and in MODE 4, without reliance on steam generators for heat removal, within 24 hours. This allows an additional 6 hours for the DHR System to be placed in service after entering MODE 4.

BASES

ACTIONS

A.1 and A.2 (continued)

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.6.1

This SR verifies that the UST and HW contain the required volume of cooling water. The 12 hour Frequency is based on operating experience and the need for operator awareness of unit evolutions that may affect the UST and HW inventory between checks. The 12 hour Frequency is considered adequate in view of other indications in the control room, including alarms to alert the operator to abnormal deviations in UST and HW levels.

REFERENCES

1. UFSAR, Section 10.4.
2. UFSAR, Chapter 10.
3. UFSAR, Chapter 15.
4. 10 CFR 50.36.

ATTACHMENT 2

MARKUP OF TECHNICAL SPECIFICATION

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3.7 PLANT SYSTEMS

3.7.6 ~~Condensate Storage Tank (CST),~~ Upper Surge Tank (UST), and Hotwell (HW)

LCO 3.7.6 The ~~CST,~~ UST~~,~~ and HW shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
MODE 4 when steam generator is relied upon for heat removal.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Requirements of the LCO not met.	A.1	Be in MODE 3.	12 hours
	AND		
	A.2	Be in MODE 4 without reliance on steam generator for heat removal.	24 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.6.1	Verify combined inventory in the UST ~~, CST~~ and HW is ≥ *155,000*~~72,000~~ gal. AND Inventory in the UST is ≥ 30,000 gal.	12 hours

B 3.7 PLANT SYSTEMS

B 3.7.6 ~~Condensate Storage Tank (CST),~~ Upper Surge Tank (UST)~~,~~ and Hotwell (HW)

BASES

BACKGROUND

The ~~CST,~~ UST~~,~~ and HW provide a source of water to the steam generators for removing decay and sensible heat from the Reactor Coolant System (RCS). The UST and HW provide a passive flow of water to the Emergency Feedwater (EFW) System (LCO 3.7.5, "Emergency Feedwater (EFW) System"). ~~The steam produced is released to the atmosphere by the main steam safety valves (MSSVs) and the atmospheric dump valves.~~*For accident mitigation, heat removal is assumed to be through steam released to the atmosphere by the main steam safety valves and the atmospheric dump valves. However, the most likely steam flow path is to the condenser and hotwell by the non-safety grade path of the turbine bypass valves.*

~~The preferred means of heat removal is to discharge to the condenser by the nonsafety grade path of the turbine bypass valves.~~

The emergency feedwater pumps are normally aligned to the upper surge tanks (UST). The UST provides the initial source of water for the EFW System. When that supply is exhausted, the pumps may be aligned to draw water from the hotwell. ~~The UST can be replenished by pumping from the condensate storage tank (CST) or from the Makeup Demineralized Water System.~~ A minimum level of 6 feet (at least 30,000 gallons) is maintained in the UST to assure an adequate source of water to the EFW until other sources can be aligned. This minimum level of 6 feet includes an allowance for instrument uncertainty and depletion of inventory while transferring the EFW suction to an alternative source of water.

The UST and the piping connecting them to the EFW pumps has been analyzed and qualified to withstand a design basis seismic event. This includes piping up to the first normally closed valve. The hotwell and connected piping used for the *TD*EFW pump suction supply has been evaluated using a "seismic experience" approach and found capable of withstanding a seismic event. Although the evaluation methodology is not recognized for licensing basis, this secondary water supply is considered to be a "seismic assured source of water." Feedwater is also available from alternate source(s).

A description of the condensate/feedwater reserves available to the EFW System is found in the UFSAR, Section 10.4, (Ref. 1).

BASES (continued)

APPLICABLE SAFETY ANALYSES

The ~~CST,~~UST~~,~~ and HW provides cooling water to remove decay heat following events in the accident analysis, as discussed in the UFSAR, Chapters 10 and 15 (Refs. 2 and 3, respectively).

~~The water inventory from the CST will not be available during a station blackout due to unavailability of power to the CST transfer pumps.~~

~~———~~The required inventory in the ~~UST,~~ UCST~~,~~ and HW ~~has not been specifically analyzed regarding the capability to permit cooling the unit down and transferring to the decay heat removal loops. The required inventory permits maintaining EFW capability until either cooling capability using the main condenser can be restored or until the Standby Shutdown Facility (SSF) (LCO 3.10.1, "Standby Shutdown Facility (SSF)") is placed in service.~~is based on maintaining hot standby conditions for one hour, followed by a 50°F per hour cooldown to decay heat removal entry conditions. Although the EFW system capacity is sufficient to support a 50°F per hour cooldown rate, this rate is not achievable during certain events, such as a natural circulation cooldown.

The ~~CST,~~UST~~,~~ and HW satisfy Criteria 2 and 3 of 10 CFR 50.36 (Ref. 4).

LCO

To satisfy LCO requirements, the ~~UST,~~ UST~~CST,~~ and HW must contain the specified volume of water available to the EFW System.

The OPERABILITY of ~~CST,~~UST~~,~~ and HW is determined by maintaining the tank volume at or above the minimum required volume.

APPLICABILITY

In MODES 1, 2, 3, and in MODE 4, when steam generator is being relied upon for heat removal, the ~~CST,~~UST~~,~~ and HW are required to be OPERABLE.

In MODES 5 and 6, the ~~CST,~~ UST~~,~~ and HW are not required because the EFW System is not required.

ACTIONS

A.1 and A.2

If the requirements of the LCO are not met, the unit must be placed in a MODE in which the LCO does not apply, with the DHR System in operation. To achieve this status, the unit must be placed in at least MODE 3 within 12 hours, and in MODE 4, without reliance on steam generators for heat removal, within 24 hours. This allows an additional 6 hours for the DHR System to be placed in service after entering MODE 4.

BASES

ACTIONS

A.1 and A.2 (continued)

The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

SURVEILLANCE REQUIREMENTS

SR 3.7.6.1

This SR verifies that the ~~CST,~~ UST~~,~~ and HW contain the required volume of cooling water. The 12 hour Frequency is based on operating experience and the need for operator awareness of unit evolutions that may affect the ~~CST,~~ UST~~,~~ and HW inventory between checks. The 12 hour Frequency is considered adequate in view of other indications in the control room, including alarms to alert the operator to abnormal deviations in ~~CST,~~ UST~~,~~ and HW levels.

REFERENCES

1. UFSAR, Section 10.4.
2. UFSAR, Chapter 10.
3. UFSAR, Chapter 15.
4. 10 CFR 50.36.

Attachment 3

Technical Justification

Attachment 3

Technical Justification

Background

The Upper Surge Tank (UST) and Hotwell (HW) provide a source of water to the steam generators for removing decay heat and sensible heat from the Reactor Coolant System (RCS) in the event of a loss of main feedwater. The UST and HW provide a passive flow of water to the Emergency Feedwater (EFW) System. The steam produced is released to the atmosphere by the main steam safety valves and the atmospheric dump valves.

The EFW pumps are normally aligned to the UST. The UST provides the initial source of water for the EFW System. When that supply is exhausted, the pumps may be aligned to draw water from the hotwell. A minimum level of 6 feet (30,000 gallons) is maintained in the UST to assure an adequate source of water to the EFW System until other sources can be aligned.

The UST and HW provide cooling water to remove decay heat following events in the accident analysis discussed in the UFSAR Chapters 10 and 15. The required inventory permits maintaining EFW capability until cooling capability is transferred to decay heat removal, the main condenser can be restored or the Standby Shutdown Facility is placed in service.

Description of the Technical Specification Change and Technical Justification

This proposed change to TS 3.7.6 removes credit for Condensate Storage Tank (CST) inventory and increases the UST and HW combined inventory from 72,000 gallons to 155,000 gallons. This change reflects the revision to section 10.4.7 of the Update Final Safety Analysis Report (UFSAR), which was approved by the NRC on June 11, 2002. The EFW inventory requirements are based on maintaining hot standby conditions for one hour followed by a 50°F/hour cooldown to decay heat removal conditions.

The volumes maintained in the UST and the condenser hotwell satisfy the EFW inventory required to support a plant cooldown following a loss of main feedwater transient with or without offsite power available. Assuming automatic steam

generator level control, the minimum Technical Specification required 30,000 gallon inventory in the UST will provide at least 40 minutes of EFW flow with all three EFW pumps operating simultaneously. This inventory requirement also assures that the plant operators have at least 20 minutes to act, following a UST low level alarm, before the UST is emptied. The EFW pumps will remain aligned to the UST as long as adequate inventory can be maintained. If the UST inventory cannot be maintained, EFW pump suction will be aligned to the hotwell. A combined inventory in the UST and condenser hotwell of 155,000 gallons is sufficient to permit cooldown of the primary coolant at a rate of 50°F/hour following a reactor trip to decay heat removal entry conditions assuming a maximum allowable, full power, UST and hotwell temperature of 130°F. During low power, startup conditions, a UST temperature of 150°F is allowed. This is justified based on the lower decay heat load. Although the EFW system capacity is sufficient to support a 50°F per hour cooldown rate, this rate is not achievable during certain events, such as a natural circulation cooldown.

As stated in the June 11, 2002, NRC Safety Evaluation, the revised section 10.4.7 of the UFSAR, which contains the above inventory requirement, is considered to be acceptable by the Staff. At the time which the revised, approved UFSAR section 10.4.7 was implemented, Duke Energy (Duke) implemented a Selected Licensee Commitment which controlled UST and hotwell inventories in accordance with the new UFSAR requirements. Additionally, Duke, by letter dated April 30, 2002, agreed to submit a proposed change to TS to reflect the revised inventory requirements. This proposed TS change fulfills that commitment.

ATTACHMENT 4

NO SIGNIFICANT HAZARDS CONSIDERATION

Attachment 4
No Significant Hazards Consideration

Pursuant to 10 CFR 50.91, Duke Power Company (Duke) has made the determination that this amendment request involves a No Significant Hazards Consideration by applying the standards established by the NRC regulations in 10 CFR 50.92. This ensures that 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:

No. This revision to Technical Specification (TS) 3.7.6 changes the inventory requirements for the Upper Surge Tank (UST) and hotwell. These components provide a suction source to the Emergency Feedwater System (EFW). This increase in inventory from 72,000 gallons to 155,000 gallons increases the required available inventory. This increase in inventory does not affect the probability or consequences of any previously evaluated accident.

(2) Create the possibility of a new or different kind of accident from any kind of accident previously evaluated:

No. This revision to the combined UST and hotwell inventory increases the required amount of water available to the EFW system. No new or different kind of accident is created by this change as only the required inventory is revised.

(3) Involve a significant reduction in a margin of safety.

No. The increase in required UST and hotwell inventory does not reduce the margin is safety. The increase provides the required inventory to ensure that the EFW can provide a Reactor Coolant System cooldown at a rate of 50°F/hour to decay heat removal entry conditions following a reactor trip.

Duke has concluded, based on the above, that there are no significant hazards considerations involved in this amendment request.

ATTACHMENT 5

ENVIRONMENTAL ASSESSMENT

ATTACHMENT 5

Environmental Assessment

Pursuant to 10 CFR 51.22(b), an evaluation of the license amendment request (LAR) has been performed to determine whether or not it meets the criteria for categorical exclusion set forth in 10 CFR 51.22(c)9 of the regulations. The LAR does not involve:

1) A significant hazards consideration.

   This conclusion is supported by the determination of no significant hazards contained in Attachment 4.

2) A significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

   This LAR will not change the types or amounts of any effluents that may be released offsite.

3) A significant increase in the individual or cumulative occupational radiation exposure.

   This LAR will not increase the individual or cumulative occupational radiation exposure.

In summary, this LAR meets the criteria set forth in 10 CFR 51.22 (c)9 of the regulations for categorical exclusion from an environmental impact statement.