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W3F1-2023-0035 10 CFR 50.90

July 26, 2023

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

Subject: Application for Technical Specification Change to Revise Surveillance Requirements Included in the Surveillance Frequency Control Program

Waterford Steam Electric Station, Unit 3
NRC Docket No. 50-382
Renewed Facility Operating License No. NPF-38

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 50.90, "Application for amendment of license, construction permit, or early site permit," Entergy Operations, Inc. (Entergy) is submitting a License Amendment Request (LAR) for an amendment to Waterford Steam Electric Station, Unit 3 (Waterford 3), Renewed Facility Operating License, Appendix A, "Technical Specifications."

Entergy requests to modify Surveillance Requirement (SR) 4.3.1.3, listed in Technical Specification (TS) 3.3.1, "Reactor Protective Instrumentation," and SR 4.3.2.3, listed in TS 3.3.2, "Engineered Safety Features Actuation System Instrumentation," to remove conflicting language that should have been removed as part of the Waterford 3 LAR to adopt Technical Specification Task Force (TSTF)-425 (Reference 1) which relocated specific surveillance frequencies to the Surveillance Frequency Control Program (SFCP) (a licensee controlled program). Waterford 3 License Amendment No. 249 (Reference 2) approved the proposed relocation of the surveillance frequencies and the associated administrative controls in accordance with the new SFCP. The proposed removal of the conflicting language from SR 4.3.1.3 and SR 4.3.2.3 will make the Waterford 3 SRs consistent with the previously approved corresponding Arkansas Nuclear One, Unit 2 (ANO-2) SRs (Reference 3).

Entergy has concluded that the proposed change presents no significant hazards consideration under the standards set forth in 10 CFR 50.92, "Issuance of amendments."

The Enclosure to this letter provides an evaluation of the proposed change. Attachment 1 to the Enclosure provides the current affected TS pages for Waterford 3, marked-up to show the proposed change. A minor conforming change to the TS Bases is provided for information only

in Attachment 2 to the Enclosure. Attachment 3 to the Enclosure provides the revised (clean) retyped TS pages.

Entergy requests approval of the proposed license amendment by September 1, 2024. The proposed change would be implemented within 60 days of issuance of the amendment.

This letter contains no new regulatory commitments.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), a copy of this application, with Enclosure and attachments, is being provided to the designated State Official.

Should you have any questions or require additional information, please contact Leia Milster, Regulatory Assurance Manager, Waterford 3, at 504-739-6250.

I declare under penalty of perjury; the foregoing is true and correct.
Executed on July 26, 2023.

Respectfully,

Philip Couture

Digitally signed by Philip Couture
Date: 2023.07.26 07:48:00 -05'00'

Phil Couture

PC/chm

Enclosure: Evaluation of the Proposed Change

Attachments to Enclosure:

1. Technical Specification Page Markups
2. Technical Specification Bases Page Markups (Information Only)
3. Retyped Technical Specification Pages

References:

1) Entergy letter to U.S. Nuclear Regulatory Commission (NRC) letter, "Application for Technical Specification Change Regarding Risk-Informed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program," ML15170A121, dated June 17, 2015

2) NRC letter to Entergy, "Waterford Steam Electric Station, Unit 3 – Issuance of Amendment RE: Adoption of TSTF-425, Revision 3 'Relocate Surveillance Frequencies to Licensee Control – RITSTF Initiative 5b,'" ML16159A419, dated July 26, 2016

3) NRC letter to Entergy, "Arkansas Nuclear One, Unit 2 – Issuance of Amendment RE: Adoption of Technical Specifications Task Force (TSTF) Traveler TSTF-425, Revision 3," ML19063B948, dated April 23, 2019

cc: NRC Region IV Regional Administrator
NRC Senior Resident Inspector – Waterford 3
NRC Project Manager Waterford 3
Louisiana Department of Environmental Quality

Enclosure

W3F1-2023-0035

Evaluation of the Proposed Change

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EVALUATION OF THE PROPOSED CHANGE

1.0 SUMMARY DESCRIPTION

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 50.90, "Application for amendment of license, construction permit, or early site permit," Entergy Operations, Inc. (Entergy) is submitting a License Amendment Request (LAR) for an amendment to Waterford Steam Electric Station, Unit 3 (Waterford 3), Renewed Facility Operating License, Appendix A, "Technical Specifications."

Waterford 3 was approved to implement the Surveillance Frequency Control Program (SFCP) (a licensee controlled program) in License Amendment No. 249 (Reference 1). Technical Specification (TS) Surveillance Requirements (SR) 4.3.1.3 and SR 4.3.2.3 are included in the SFCP. This LAR proposes to modify SR 4.3.1.3, listed in TS 3.3.1, "Reactor Protective Instrumentation," and SR 4.3.2.3, listed in TS 3.3.2, "Engineered Safety Features Actuation System Instrumentation," to remove site-specific out of context language that conflicts with the application of the SFCP controls on the Reactor Protective System (RPS) reactor trip system and Engineered Safety Features Actuation System (ESFAS) response time testing frequencies.

2.0 DETAILED DESCRIPTION

2.1 System Design and Operation

The RPS consists of sensors, calculators, logic, and other equipment necessary to monitor selected Nuclear Steam Supply System (NSSS) and containment conditions and to effect reliable and rapid Control Element Assembly (CEA) insertion (reactor trip) if any or a combination of the monitored conditions approach specified safety system settings. The RPS functions are to protect the reactor core and Reactor Coolant System (RCS) pressure boundary for defined anticipated operational occurrences (AOOs) and to provide assistance in limiting the consequences for certain postulated accidents. Four measurement channels with electrical and physical separation are provided for each parameter used in the direct generation of trip signals. A two-out-of-four coincidence of like trip signals is required to generate a reactor trip signal.

The reactor trip signal deenergizes the control element drive mechanism (CEDM) coils, allowing all CEAs to drop into the core.

The safety related instrumentation and controls of the Engineered Safety Features (ESF) system include:

(1) the ESFAS, which consists of the electrical and mechanical devices and circuitry (from sensors to actuation device input terminals) involved in generating those signals that actuate the required ESF systems, and

(2) the arrangement of components that perform protective actions after receiving a signal from either the ESFAS or the operator.

The following actuation signals are generated by the ESFAS when the monitored variables reach the levels that are indicative of conditions which require protective action:

a) Safety Injection Actuation Signal (SIAS)
b) Containment Isolation Actuation Signal (CIAS)
c) Containment Spray Actuation Signal (CSAS)
d) Main Steam Isolation Signal (MSIS)
e) Emergency Feedwater Actuation Signal (EFAS)
f) Recirculation Actuation Signal (RAS)

The ESF system device actuation circuitry receives (1) actuation signals from the ESFAS or the operator, and (2) permissive signals from sensors which monitor conditions that affect ESF system performance. The signals from the ESFAS actuate the ESF system equipment. The permissive signals provide additional interlocks, blocks and sequencing necessary to provide proper ESF system operation.

2.2 Current TS Requirements

Waterford 3 SR 4.3.1.3 requires response time testing of the RPS reactor trip system instrumentation and SR 4.3.2.3 requires response time testing of the ESFAS instrumentation. The test frequencies for these SRs are controlled in accordance with the SFCP (a licensee controlled program). Currently, the SRs also include explicit requirements controlled by the TSs that conflict with the controls on the application of the response time testing frequencies in accordance with the SFCP.

SR 4.3.1.3 currently specifies that: "The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit in accordance with the Surveillance Frequency Control Program. Neutron detectors, Core Protection Calculators, and CEACs [Control Element Assembly Calculator] are exempt from response time testing. Each test shall include at least one channel per function such that all channels are tested as shown in the 'Total No. of Channels' column of Table 3.3-1."

SR 4.3.2.3 currently specifies that: "The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within its limit in accordance with the Surveillance Frequency Control Program. Each test shall include at least one channel per function such that all channels are tested as shown in the 'Total No. of Channels' Column of Table 3.3-3."

As written, the current SRs, which were approved in License Amendment No. 249 (Reference 1), are causing confusion when attempting to evaluate risk measures related to the SRs and due to the SRs referring to both the SFCP and TS Tables as providing the controls on the surveillance frequencies for performing the required response time testing. The intent of adopting TSTF-425 was, in part, to relocate the controls for performance of SR 4.3.1.3 and SR 4.3.2.3 from the TSs to the SFCP. Entergy should have requested deletion of the last sentence in SR 4.3.1.3 in the LAR to adopt TSTF-425 (Reference 2) and deletion of the last

sentence in SR 4.3.2.3 in the Request for Additional Information (RAI) response letter regarding the TSTF-425 LAR (Reference 3).

Waterford 3 has not adopted NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants," (CE-STS) (Reference 4). The Waterford 3 TS are based on NUREG-0212, "Standard Technical Specifications for Combustion Engineering Pressurized Water Reactors," (Reference 5). Notwithstanding, the RPS reactor trip instrumentation response time testing requirements in Waterford 3 SR 4.3.1.3 correspond to the CE-STS requirements in SR 3.3.1.14 and SR 3.3.2.5 and the ESFAS instrumentation response time testing requirements in Waterford 3 SR 4.3.2.3 correspond to the CE-STS requirements in SR 3.3.5.4. However, due to the non-standard nature of the Waterford 3 SRs, the general format, presentation style, and content deviate from the corresponding CE-STS SRs.

2.3 Reason for the Proposed Change

As indicated in Attachment 3 to the LAR to adopt TSTF-425 (Reference 2), the proposed changes to Waterford 3 SR 4.3.1.3 included the deletion of the text: "at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function" from the last sentence of SR 4.3.1.3. Similarly, as indicated in Attachment 2 to the RAI response letter regarding the TSTF-425 LAR (Reference 3), the proposed changes to Waterford 3 SR 4.3.2.3 included the deletion of the text: "at least once every N times 18 months where N is the total number of redundant channels in a specific ESFAS function" from the last sentence of SR 4.3.2.3. The text that was deleted had provided the method for determining the staggered test basis frequency for performing the RPS reactor trip system and ESFAS instrumentation response time testing on the channels shown in the "Total No. of Channels" column of Tables 3.3-1 and 3.3-3, respectively. The failure to remove the remaining text in the last sentences of SR 4.3.1.3 and SR 4.3.2.3 introduced out of context and conflicting language that make the controls on RPS reactor trip system and ESFAS instrumentation response time testing confusing since the SRs now refer to both the SFCP and TS Table 3.3-1 and Table 3.3-3 as controlling the response time testing frequency.

Removing the conflicting language from the last sentences of SR 4.3.1.3 and SR 4.3.2.3 is intended to eliminate the current uncertainty regarding application of the SFCP controls to the RPS reactor trip system and ESFAS instrumentation response time tests.

2.4 Description of the Proposed Change

SR 4.3.1.3 is proposed to be modified by removing the last sentence as indicated in the markup below:

> "The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit in accordance with the Surveillance Frequency Control Program. Neutron detectors, Core Protection Calculators, and CEACs are exempt from response time testing. ~~Each test shall include at least one channel per function such that all channels are tested as shown in the 'Total No. of Channels' column of Table 3.3-1.~~"

SR 4.3.2.3 is proposed to be modified by removing the last sentence as indicated in the markup below:

> "The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within its limit in accordance with the Surveillance Frequency Control Program. ~~Each test shall include at least one channel per function such that all channels are tested as shown in the 'Total No. of Channels' Column of Table 3.3-3.~~"

Attachment 1 to this Enclosure provides markups of TS pages 3/4 3-1 and 3/4 3-13 consistent with the proposed changes to SR 4.3.1.3 and SR 4.3.2.3, as indicated above. The revised clean retyped pages incorporating the changes are provided in Attachment 3 to this Enclosure.

In addition, the current Waterford 3 TS Bases Section 3/4.3.1 and 3/4.3.2, "Reactor Protective and Engineered Safety Features Actuation Systems Instrumentation," is modified as indicated below to remove the phrase "...at the specified frequencies":

> "The measurement of response time ~~at the specified frequencies~~ provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the safety analyses."

A markup of TS Bases page B 3/4 3-1d that is consistent with the change to the TS Bases Section 3/4.3.1 and 3/4.3.2 indicated above is provided in Attachment 2 to this Enclosure for information only. The TS Bases change is consistent with the proposed changes in this LAR and is considered a minor conforming change.

3.0 TECHNICAL EVALUATION

3.1 Waterford 3 Implementation of TSTF-425

Waterford 3 License Amendment No. 249 (Reference 1) modified the TS by relocating specific surveillance frequencies to the SFCP (a licensee controlled program). The changes reflect the adoption of Nuclear Regulatory Commission (NRC) approved TSTF-425, "Relocate Surveillance Frequencies to Licensee Control – RITSTF Initiative 5b," Revision 3 (Reference 6). Adopting TSTF-425, Revision 3, provided the controls for the administrative relocation of the applicable surveillance frequencies, which included the addition of the SFCP to the Administrative Controls section of the Waterford 3 TS as TS Section 6.5.18.

Waterford 3 implemented License Amendment No. 249 on October 20, 2016, which relocated the applicable TS surveillance frequencies to the SFCP. Subsequently, while reviewing the Waterford 3 SRs for proposed changes to the Surveillance Test Intervals (STIs) under the SFCP, it was identified that SR 4.3.1.3 and SR 4.3.2.3 do not provide clear guidance and include conflicting language regarding the controls for establishing the required frequencies for response time testing of their respective RPS reactor trip system and ESFAS instrumentation. The lack of clarity was determined to be caused by the apparent out of context statement in the SRs that "Each test shall include at least one channel per function such that all channels are tested as shown in the Total No. of Channels column of Table 3.3-1 [Table 3.3-3 for the ESFAS

channels]." The removal of this statement from the SRs should have been included as part of the Waterford 3 LAR to adopt TSTF-425 (Reference 2). The failure to remove this conflicting language introduced uncertainty regarding the controls on RPS reactor trip system and ESFAS instrumentation response time since the SRs currently refer to both the SFCP and TS Table 3.3-1 and Table 3.3-3 as controlling the response time testing frequencies. The purpose of this LAR is to modify Waterford 3 SR 4.3.1.3 and SR 4.3.2.3 to remove the conflicting language by deleting the last sentence in each of the SRs in order to restore clarity regarding the controls on response time testing frequencies.

3.2 Waterford 3 and ANO-2 Similarities with TSTF-425

Arkansas Nuclear One – Unit 2 (ANO-2) submitted a LAR on February 6, 2018 for the relocation of specific TS surveillance frequency requirements to a licensee controlled program (SFCP) by adopting TSTF-425 (Reference 7), similar to the Waterford 3 LAR to adopt TSTF-425 (Reference 2). The ANO-2 and Waterford 3 TS are both based on NUREG-0212 (Reference 5), and not the NUREG-1432 CE-STS (Reference 4), to which TSTF-425 is marked up. Both the Waterford 3 TS and the ANO-2 TS include RPS reactor trip system and ESFAS instrumentation response time testing SRs that correspond to the CE-STS SRs. Although the SR numbering scheme for the SRs differs slightly between Waterford 3 and ANO-2, the original language of Waterford 3 SR 4.3.1.3 and SR 4.3.2.3 matches the original language of the respective ANO-2 SR 4.3.1.1.3 and SR 4.3.2.1.3. Changes made in the ANO-2 TSTF-425 submittal (Reference 7) are shown here:

ANO-2 SR 4.3.1.1.3 (Waterford 3 SR 4.3.1.3)

> The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit in accordance with the Surveillance Frequency Control Program ~~at least once per 18 months~~. Neutron detectors are exempt from response time testing. ~~Each test shall include at least one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.~~

ANO-2 SR 4.3.2.1.3 (Waterford 3 SR 4.3.2.3)

> The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit in accordance with the Surveillance Frequency Control Program ~~at least once per 18 months. Each test shall include at least one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3~~.

Furthermore, the RPS reactor trip system instrumentation response time testing requirements in Waterford 3 SR 4.3.1.3 and ANO-2 SR 4.3.1.1.3 correspond to the CE-STS requirements in SR 3.3.1.14 and SR 3.3.2.5. Also, the ESFAS instrumentation response time testing requirements in Waterford 3 SR 4.3.2.3 and ANO-2 SR 4.3.2.1.3 correspond to the CE-STS

requirements in SR 3.3.5.4. However, the Waterford 3 and ANO-2 SRs deviate from the corresponding CE-STS SRs since the general format, presentation style, and content of the NUREG-0212 non-standard CE TS are retained. Accordingly, both the Waterford 3 and ANO-2 LARs had to reconcile the differences between their non-standard CE TS and the TSTF-425 markups of the CE-STS. Entergy has previously concluded in the Waterford 3 and ANO-2 LARs that the deviations from the NUREG-1432 CE-STS and TSTF-425 markups have no impact on the NRC staff's model safety evaluation (SE) published in the Notice of Availability, dated July 6, 2009 (74 FR 31996) (Reference 8).

Based on a review of the changes to SR 4.3.1.1.3 and SR 4.3.2.1.3 in the ANO-2 LAR to adopt TSTF-425 (see Attachment 3 to Reference 7), it is apparent that ANO-2 deleted the entire last sentence from both SRs. As indicated in the TS markups in Attachment 3 to the Waterford 3 LAR to adopt TSTF-425 (Reference 2) and Attachment 2 to the RAI response letter regarding the TSTF-425 LAR (Reference 3), the proposed changes to Waterford 3 SR 4.3.1.3 and SR 4.3.2.3 removed some, but not all, of the text in the last sentences of the SRs. See below:

Waterford 3 SR 4.3.1.3 Markup from Reference 2

> The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit in accordance with the Surveillance Frequency Control Program ~~at least once per 18 months~~. Neutron detectors **[, Core Protection Calculators, and CEACs]** are exempt from response time testing. Each test shall include at least one channel per function such that all channels are tested ~~at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function~~ as shown in the "Total No. of Channels" column of Table 3.3-1.
>
> Note: The **bold green text** above within the [ ], was added as part of Waterford 3 TS Amendment 260, dated August 24, 2021 (Reference 14), and does not impact the changes made in support of TSTF-425.

Waterford 3 SR 4.3.2.3 Markup from Reference 3

> The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit in accordance with the Surveillance Frequency Control Program ~~at least once per 18 months~~. Each test shall include at least one channel per function such that all channels are tested ~~at least once every N times 18 months where N is the total number of redundant channels in a specific ESFAS function~~ as shown in the "Total No. of Channels" Column of Table 3.3-3.

Removal of the additional text, which relates to the staggered testing strategy, from the last sentences of the Waterford 3 SR 4.3.1.3 and SR 4.3.2.3, will align Waterford 3 SRs with the current corresponding ANO-2 SR 4.3.1.1.3 and SR 4.3.2.1.3.

The ANO-2 SRs were approved on April 23, 2019, as part of the ANO-2 License Amendment No. 315 (Reference 9). Aligning the language in the Waterford 3 SRs with the language in the corresponding ANO-2 SRs will eliminate the uncertainty regarding application of the RPS reactor trip system and ESFAS instrumentation surveillance frequencies and allow the SFCP to assess proposed changes to the Surveillance Test Intervals consistent with TSTF-425 and the intent of Nuclear Energy Institute (NEI) 04-10, "Risk-Informed Technical Specifications Initiative

5b – Risk-Informed Method for Control of Surveillance Frequencies," Revision 1 (Reference 10), which allows licensees to add or remove the requirement to perform surveillances on a staggered test basis.

3.3 Minor Conforming TS Bases Change

The Waterford 3 TS Bases Section 3/4.3.1 and 3/4.3.2 is modified consistent with the proposed changes to the LAR by removing the phrase "...at the specified frequencies" from the description of the purpose for measurement of the RPS reactor trip system and ESFAS instrumentation response times. This TS Bases change is considered a minor conforming change that is necessary because the frequencies have been relocated to the SFCP and, as such, the SRs will no longer contain the specified frequencies for response time testing of the RPS reactor trip system and ESFAS instrumentation. The TS Bases markup is provided for information only in Attachment 2 to this Enclosure.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

The proposed changes provided in TSTF-425, Revision 3 (Reference 6), and the NRC's model SE, dated July 6, 2009 (Reference 8), and their relationship to the regulatory requirements, are applicable to and bound the changes to the Waterford 3 SR 4.3.1.3 and SR 4.3.2.3 as proposed in this LAR to the extent practicable given that the Waterford 3 TS are based on NUREG-0212 (Reference 5) and not the NUREG-1432 CE-STS (Reference 4). The SRs are retained in the TS as required by 10 CFR 50.36(c)(3) such that the requirements relating to testing, calibration, and inspection continue to assure that facility operation will be within safety limits and the Limiting Conditions for Operation (LCOs) will be met. Only the controls on surveillance frequencies are relocated to the SFCP (a licensee controlled program). Entergy currently controls changes to the surveillance frequencies using the SFCP, which was added to the Administrative Controls section of the Waterford 3 TS as TS Section 6.5.18 by implementation of the previously approved License Amendment No. 249 (Reference 1).

NRC Regulatory Guide 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," Revision 1 (Reference 11), provides a framework for evaluating the risk impact of proposed changes to surveillance frequencies which requires identification of the risk contribution from impacted surveillances, determination of the risk impact from the change to the proposed surveillance frequency, and performance of sensitivity and uncertainty evaluations. The application of NEI 04-10, Revision 1, (Reference 10) in accordance with the SFCP administrative controls in Waterford 3 TS Section 6.5.18 satisfies the intent of Regulatory Guide 1.177.

The administrative controls of the SFCP require the application of NEI 04-10, Revision 1, as approved by the NRC, for any changes to surveillance frequencies within the SFCP. In accordance with NEI 04-10, Revision 1, Entergy uses Probabilistic Risk Assessment (PRA) methods to determine the risk impact of the modifications to the TS surveillance frequencies of the applicable plant equipment. This methodology provides a risk-informed, performance based

approach for establishment of surveillance frequencies, consistent with the philosophy of NRC Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," Revision 2 (Reference 12). Sensitivity studies are performed on important PRA parameters. PRA technical adequacy is addressed consistent with the guidance in NRC Regulatory Guide 1.200, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," (Reference 13).

The proposed changes in this LAR do not change the SFCP as approved in License Amendment No. 249 and, therefore, the key principles of risk-informed decisionmaking as delineated in Regulatory Guides 1.177 and 1.174 are maintained, in that:

1. The proposed change meets the current regulations, unless it explicitly relates to a requested exemption or rule change;

2. The proposed change is consistent with the defense-in-depth philosophy;

3. The proposed change maintains sufficient safety margins;

4. Increases in core damage frequency or risk resulting from the proposed change are small and consistent with the Commission's Safety Goal Policy Statement; and

5. The impact of the proposed change is monitored with performance measurement strategies.

The proposed changes to Waterford 3 SR 4.3.1.3 and SR 4.3.2.3 remove conflicting language that make the controls on RPS reactor trip system and ESFAS instrumentation response time testing confusing since the SRs currently refer to both the SFCP and TS Table 3.3-1 and TS Table 3.3-3 as controlling the response time testing frequencies. Removing the conflicting language will eliminate the current uncertainty regarding application of the SFCP controls to the RPS reactor trip system and ESFAS instrumentation response time tests and allow the SFCP to properly assess proposed changes to the Surveillance Test Intervals consistent with TSTF-425 and the intent of NEI 04-10, Revision 1, Step 12-A1-1, which addresses evaluation of test strategies and timing for performing surveillance tests, either staggered or sequential, on redundant components or trains.

4.2 Precedent

This LAR is similar to that submitted for ANO-2 on February 6, 2018 (Reference 7) and approved on April 23, 2019 in ANO-2 License Amendment No. 315 (Reference 9). Both Waterford 3 and ANO-2 are CE plants with TS based on NUREG-0212 (Reference 5), which include TS 3.3.1 for RPS reactor trip system instrumentation and TS 3.3.2 for the ESFAS instrumentation. The proposed changes to modify the response time testing language will align the Waterford 3 SR 4.3.1.3 and SR 4.3.2.3 with the current ANO-2 SR 4.3.1.1.3 and SR 4.3.2.1.3. The changes are consistent with the NUREG-1432, CE-STS, to the extent practicable given that the Waterford 3 and ANO-2 TS are based on NUREG-0212.

4.3 No Significant Hazards Consideration Analysis

Entergy Operations, Inc. (Entergy) has evaluated the proposed changes to the TS using the criteria in 10 CFR 50.92 and has determined that the proposed changes do not involve a significant hazards consideration.

Entergy proposes to modify the Waterford 3 TS Surveillance Requirements (SR) to remove conflicting language that makes the controls on Reactor Protective System (RPS) reactor trip system and Engineered Safety Features Actuation System (ESFAS) instrumentation response time testing confusing since the SRs currently refer to both the Surveillance Frequency Control Program (SFCP) (a licensee controlled program) and existing TS requirements as controlling the response time testing frequencies. Removing the conflicting language will eliminate the current uncertainty regarding application of the SFCP controls to the RPS reactor trip system and ESFAS instrumentation response time testing frequencies and allow the SFCP to properly assess proposed changes to the Surveillance Test Intervals (STIs) consistent with Technical Specification Task Force (TSTF)-425 and the intent of Nuclear Energy Institute (NEI) 04-10, Revision 1. The proposed changes will align the Waterford 3 SR response time testing language with the language in the corresponding SR previously approved for Arkansas Nuclear One – Unit 2 (ANO-2).

Basis for no significant hazards consideration determination: As required by 10 CFR 50.91(a), Entergy analysis of the issue of no significant hazards consideration is presented below:

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

   Response: No

   The proposed change removes conflicting language affecting the surveillance frequencies for the RPS reactor trip system and ESFAS instrumentation response time testing SRs. Surveillance frequencies are not an initiator to any accident previously evaluated. As such, the probability of any accident previously evaluated is not significantly increased. The RPS and ESFAS system instrumentation is still required to be operable, meet the acceptance criteria for the SRs, and be capable of performing any mitigative function assumed in the accident analysis. As a result, it can be concluded that the proposed change does not affect reactor operations or the accident analyses in a manner that would significantly increase the radiological consequences of any accident previously evaluated.

   Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

   Response: No

No new or different accidents result from utilizing the proposed change. The changes to the SRs do not involve a physical alteration of the plant (i.e., no new or different type of equipment will be installed) or a change in the methods governing normal plant operation. The changes do not impose any new or different requirements, or alter assumptions made in the safety analysis. The proposed changes do not establish a potential new accident precursor or affect the functional capability of safety-related equipment.

Therefore, this change does not create the possibility of a new or different kind of accident from an accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed changes to the RPS reactor trip system and ESFAS instrumentation surveillance frequencies do not reduce the margins of safety associated with the design, operation, testing methods, and acceptance criteria of the affected structures, systems, and components (SSCs). The applicable codes and standards will continue to be met as described in the plant licensing basis. No changes to the safety analysis assumptions, safety limits, or limiting safety system settings are being made as a result of the proposed changes and, as such, there is no adverse effect on plant safety.

Therefore, this change does not involve a significant reduction in a margin of safety.

Based upon the reasoning presented above, Entergy concludes that the requested change involves no significant hazards consideration, as set forth in 10 CFR 50.92(c), “Issuance of Amendment” and accordingly, a finding of "no significant hazards consideration" is justified.

4.4 Conclusions

In conclusion, based on the considerations discussed above, (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.

5.0 ENVIRONMENTAL CONSIDERATION

The proposed change would change 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 would change an inspection or surveillance requirement. However, the proposed change does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed

change meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed change.

6.0 REFERENCES

1. NRC letter to Entergy, "Waterford Steam Electric Station, Unit 3 – Issuance of Amendment RE: Adoption of TSTF-425, Revision 3 'Relocate Surveillance Frequencies to Licensee Control – RITSTF initiative 5b,'" ML16159A419, dated July 26, 2016

2. Entergy letter to NRC, "Application for Technical Specification Change Regarding Risk-Informed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program," Waterford Steam Electric Station, Unit 3, ML15170A122, dated June 17, 2015

3. Entergy letter to NRC, "Responses to Request for Additional Information Regarding the Risk-Informed Surveillance Requirements License Amendment Request (LAR)," Waterford Steam Electric Station, Unit 3, ML16063A532, dated March 3, 2016

4. NRC NUREG-1432, Revision 5.0, "Standard Technical Specifications, Combustion Engineering Plants," ML21258A421, dated September 2021

5. NRC NUREG-0212, Revision 3, "Standard Technical Specifications for Combustion Engineering Pressurized Water Reactors," dated December 1981

6. TSTF Traveler, TSTF-425, Revision 3, "Relocate Surveillance Frequencies to Licensee Control – RITSTF Initiative 5b," ML090850642, dated March 18, 2009

7. Entergy letter to NRC, "Application for Technical Specification Change Regarding RiskInformed Justification for the Relocation of Specific Surveillance Frequency Requirements to a Licensee Controlled Program (TSTF-425)," Arkansas Nuclear One, Unit 2, ML18038B354, dated February 6, 2018

8. Federal Register, Vol. 74, No. 127, pages 31996 – 32006, NRC, "Notice of Availability of Technical Specification Improvement to Relocate Surveillance Frequencies to Licensee Control – Risk-Informed Technical Specification Task Force (RITSTF) Initiative 5b, Technical Specification Task Force – 425, Revision 3," (74 FR 31996), dated July 6, 2009

9. NRC letter to Entergy, "Arkansas Nuclear One, Unit 2 – Issuance of Amendment RE: Adoption of Technical Specifications Task Force (TSTF) Traveler TSTF-425, Revision 3," ML19063B948, dated April 23, 2019

10. NEI Report NEI 04-10, "Risk-Informed Technical Specifications Initiative 5b – Risk-Informed Method for Control of Surveillance Frequencies," Revision 1, ML071360456, dated April 2007

11. NRC Regulatory Guide 1.177, Revision 1, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications," ML100910008, dated May 2011

12. NRC Regulatory Guide 1.174, Revision 2, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," ML100910006, dated May 2011

13. NRC Regulatory Guide 1.200, Revision 2, "An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities," ML090410014, dated March 2009

14. NRC letter to Entergy, "Waterford Steam Electric station, Unit 3 – Issuance of Amendment No. 260 RE: Digital Upgrade to the Core Protection Calculator and Control Element Assembly Calculator Systems," ML21131A243, dated August 24, 2021

7.0 ATTACHMENTS

1. Technical Specification Page Markups

2. Technical Specification Bases Page Markups (Information Only)

3. Retyped Technical Specification Pages

Enclosure, Attachment 1

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Technical Specification Page Markups

(2 TS Pages Follow)

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR PROTECTIVE INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the reactor protective instrumentation channels and bypasses of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each reactor protective instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-1.

4.3.1.2 The logic for the bypasses shall be demonstrated OPERABLE prior to each reactor startup unless performed during the preceding 92 days. The total bypass function shall be demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program during CHANNEL CALIBRATION testing of each channel affected by bypass operation.

4.3.1.3 The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit in accordance with the Surveillance Frequency Control Program. Neutron detectors, Core Protection Calculators, and CEACs are exempt from response time testing. ~~Each test shall include at least one channel per function such that all channels are tested as shown in the "Total No. of Channels" column of Table 3.3-1.~~

4.3.1.4 DELETED

4.3.1.5 DELETED

4.3.1.6 DELETED

4.3.1.7 Perform a test on the CPC DNBR/LPD trip output through the contact interface to the PPS in accordance with the Surveillance Frequency Control Program.

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The Engineered Safety Features Actuation System (ESFAS) instrumentation channels and bypasses shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.

b. With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

SURVEILLANCE REQUIREMENTS

4.3.2.1 Each ESFAS instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-2.

4.3.2.2 The logic for the bypasses shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by bypass operation. The total bypass function shall be demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program during CHANNEL CALIBRATION testing of each channel affected by bypass operation.

4.3.2.3 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit in accordance with the Surveillance Frequency Control Program. ~~Each test shall include at least one channel per function such that all channels are tested as shown in the "Total No. of Channels" Column of Table 3.3-3.~~

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Technical Specification Bases Page Markups (Information Only)

(1 TS Bases Page Follow)

cabinet reference accuracy, calibration equipment errors (M&TE), and RPS/ESFAS cabinet bistable Drift. Periodic testing assures that actual setpoints are within their Allowable Values. A channel is inoperable if its actual setpoint is not within its Allowable Value and corrective action must be taken. Operation with a trip set less conservative than its setpoint, but within its specified ALLOWABLE VALUE is acceptable on the basis that the difference between each trip Setpoint and the ALLOWABLE VALUE is equal to or less than the Periodic Test Error allowance assumed for each trip in the safety analyses.

→(EC-26338, Ch. 67)

The Core Protection Calculator, High Logarithmic Power (HLP), and Reactor Coolant System Flow use a single bistable to initiate both the permissive and automatic operating bypass removal functions. A single bistable cannot both energize and de-energize at a single, discrete value due to hysteresis. The CPC automatic bypass removal and permissive for the HLP trip bypass occur at the bistable setpoint (nominally 10^{-4}% power). However, the HLP automatic bypass removal and permissive for CPC trip bypass occur at the reset value of the bistable. Also note if the bistable setpoint is changed as part of the Special Test Exception 3.10.3, the same dead band transition is applicable.

←(EC-26338, Ch. 67)

The measurement of response time ~~at the specified frequencies~~ provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the safety analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

→(LBDCR 22-034, Ch. 104)

Response time may be verified by any series of sequential, overlapping, or total channel measurements, including allocated sensor response time, such that the response time is verified. Allocations for sensor response times may be obtained from records of test results, vendor test data, or vendor engineering specifications. Topical Report CE NPSD-1167-A, "Elimination of Pressure Sensor Response Time Testing Requirements," provides the basis and methodology for using allocated sensor response times in the overall verification of the channel response time for specific sensors identified in the Topical Report. The response time may be verified for components that replace the components that were previously evaluated in CE NPSD-1167-A provided that the components have been evaluated in accordance with the NRC approved methodology as discussed in Attachment 1 to TSTF-569, "Methodology to Eliminate Pressure Sensor and Protection Channel (for Westinghouse plants only) Response Time Testing." Response time verification for other sensor types must be demonstrated by test. The allocation of sensor response times must be verified prior to placing a new component in operation and reverified after maintenance that may adversely affect the sensor response time.

←(LBDCR 22-034, Ch. 104)

Enclosure, Attachment 3

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Retyped Technical Specification Pages

(2 TS Pages Follow)

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR PROTECTIVE INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1 As a minimum, the reactor protective instrumentation channels and bypasses of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1 Each reactor protective instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-1.

4.3.1.2 The logic for the bypasses shall be demonstrated OPERABLE prior to each reactor startup unless performed during the preceding 92 days. The total bypass function shall be demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program during CHANNEL CALIBRATION testing of each channel affected by bypass operation.

4.3.1.3 The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit in accordance with the Surveillance Frequency Control Program. Neutron detectors, Core Protection Calculators, and CEACs are exempt from response time testing.

4.3.1.4 DELETED

4.3.1.5 DELETED

4.3.1.6 DELETED

4.3.1.7 Perform a test on the CPC DNBR/LPD trip output through the contact interface to the PPS in accordance with the Surveillance Frequency Control Program.

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2 The Engineered Safety Features Actuation System (ESFAS) instrumentation channels and bypasses shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.

b. With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

SURVEILLANCE REQUIREMENTS

4.3.2.1 Each ESFAS instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-2.

4.3.2.2 The logic for the bypasses shall be demonstrated OPERABLE during the at power CHANNEL FUNCTIONAL TEST of channels affected by bypass operation. The total bypass function shall be demonstrated OPERABLE in accordance with the Surveillance Frequency Control Program during CHANNEL CALIBRATION testing of each channel affected by bypass operation.

4.3.2.3 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit in accordance with the Surveillance Frequency Control Program.