



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

August 7, 2024

Site Vice President  
Entergy Operations, Inc.  
Waterford Steam Electric Station, Unit 3  
17265 River Road  
Killona, LA 70057-3093

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - ISSUANCE OF  
AMENDMENT NO. 271 RE: TECHNICAL SPECIFICATION CHANGE TO  
REVISE SURVEILLANCE REQUIREMENTS INCLUDED IN THE  
SURVEILLANCE FREQUENCY CONTROL PROGRAM  
(EPID L-2023-LLA-0104)

Dear Site Vice President:

The U.S. Nuclear Regulatory Commission (the Commission) has issued the enclosed Amendment No. 271 to Renewed Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3 (Waterford 3). This amendment consists of changes to the technical specifications (TSs) in response to your application dated July 26, 2023 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML23207A049).

The amendment revises 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 license amendment request (LAR) to adopt Technical Specifications Task Force (TSTF) Traveler TSTF-425 (Package ML15170A121), which relocated specific surveillance frequencies to the surveillance frequency control program (SFCP) (a licensee controlled program). Waterford 3 License Amendment No. 249 dated July 26, 2016 (ML16159A419), 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 SRs (ML19063B948).

A copy of the related safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's monthly *Federal Register* notice.

Sincerely,

*/RA/*

Jason J. Drake, Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosures:

1. Amendment No. 271 to NPF-38
2. Safety Evaluation

cc: Listserv



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 RENEWED FACILITY OPERATING LICENSE

Amendment No. 271  
Renewed License No. NPF-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Entergy Operations, Inc. (EOI), dated July 26, 2023, 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 Renewed 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. 271, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. EOI 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 and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Jennivine K. Rankin, Chief  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to Renewed Facility  
Operating License No. NPF-38 and  
the Technical Specifications

Date of Issuance: August 7, 2024

ATTACHMENT TO LICENSE AMENDMENT NO. 271

TO RENEWED FACILITY OPERATING LICENSE NO. NPF-38

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

Replace the following pages of Renewed Facility Operating License No. NPF-38 and the Appendix A, Technical Specifications, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Renewed Facility Operating License

REMOVE

-4-

INSERT

-4-

Technical Specifications

REMOVE

3/4 3-1

3/4 3-13

INSERT

3/4 3-1

3/4 3-13

the NRC of any action by equity investors or successors in interest to Entergy Louisiana, LLC that may have an effect on the operation of the facility.

- C. This renewed license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

1. Maximum Power Level

EOI is authorized to operate the facility at reactor core power levels not in excess of 3716 megawatts thermal (100% power) in accordance with the conditions specified herein.

2. Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 271, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the renewed license. EOI shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. Antitrust Conditions

- (a) Entergy Louisiana, LLC shall comply with the antitrust license conditions in Appendix C to this renewed license.
- (b) Entergy Louisiana, LLC is responsible and accountable for the actions of its agents to the extent said agent's actions contravene the antitrust license conditions in Appendix C to this renewed license.

### 3/4.3 INSTRUMENTATION

#### 3/4.3.1 REACTOR PROTECTIVE INSTRUMENTATION

##### LIMITING CONDITION FOR OPERATION

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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

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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

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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

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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.





UNITED STATES  
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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 271 TO

RENEWED FACILITY OPERATING LICENSE NO. NPF-38

ENTERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By application dated July 26, 2023 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML23207A049), Entergy Operations Inc. (Entergy, the licensee) requested changes to the technical specifications (TSs) for the Waterford Steam Electric Station, Unit 3 (Waterford 3).

The proposed change would revise 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 license amendment request (LAR) dated June 17, 2015 (Package ML15170A121), to adopt Technical Specifications Task Force (TSTF) Traveler TSTF-425, which relocated specific surveillance frequencies to the surveillance frequency control program (SFCP) (a licensee-controlled program). Waterford 3 License Amendment No. 249 dated July 26, 2016 (ML16159A419), approved the proposed relocation of the surveillance frequencies and the associated administrative controls in accordance with the new SFCP.

1.1 Proposed Changes to SR 4.3.1.3 and SR 4.3.2.3

The licensee proposed to modify SR 4.3.1.3 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.~~

The licensee proposed to modify SR 4.3.2.3 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 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.~~

## 2.0 REGULATORY EVALUATION

The regulation at Title 10 of the *Code of Federal Regulations* (10 CFR) 50.36(c)(3) requires that TSs include items in the category of SRs, which are “requirements relating to test, calibration, or inspection needed to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.”

Regulatory Guide (RG) 1.177, “An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications,” Revision 1, May 2011 (ML100910008), 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 Nuclear Energy Institute (NEI) 04-10, Revision 1, “Risk-Informed Technical Specifications Initiative 5b, Risk-Informed Method for Control of Surveillance Frequencies,” April 2007 (ML071360456) in accordance with the SFCP administrative controls in Waterford 3 TS section 6.5.18, “Surveillance Frequency Control Program,” satisfies the intent of RG 1.177.

## 3.0 TECHNICAL EVALUATION

The licensee proposed to modify SR 4.3.1.3, listed in TS 3.3.1 and SR 4.3.2.3, listed in TS 3.3.2, 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.

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.

The licensee stated that, “the current SRs, which were approved in License Amendment No. 249 [ML16159A419], 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 licensee’s LAR to adopt TSTF-425 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 and 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 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.

The guidance in NEI 04-10, Revision 1, states, in part, that “NEI 04-10 Revision 1 contains new information ... to address how Surveillances which are performed on a Staggered Test Basis are modeled in the risk assessment performed to support a change to the Frequency. This will allow licensees to add or remove the requirement to perform Surveillances on a Staggered Test Basis under the Surveillance Frequency Control Program.”

The licensee stated that the SFCP will continue to be used to assess proposed changes to the SR 4.3.1.3 and SR 4.3.2.3 surveillance test intervals consistent with TSTF-425 and the intent of NEI 04-10.

The NRC staff reviewed the proposed changes to SRs 4.3.1.3 and 4.3.2.3 and found them acceptable because removing the conflicting language from the last sentences of SRs 4.3.1.3 and 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 and will continue to meet the intent of the SFCP (consistent with TSTF-425 and the intent of NEI 04-10) and the requirements of 10 CFR 50.36(c).

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Louisiana State official was notified of the proposed issuance of the amendment on June 12, 2024. 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, published in the *Federal Register* on December 26, 2023 (88 FR 88983), and there has been no public comment on such finding. 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) there is reasonable assurance that 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.

Principal Contributor: Tarico Sweat, NRR

Date: August 7, 2024

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - ISSUANCE OF AMENDMENT NO. 271 RE: TECHNICAL SPECIFICATION CHANGE TO REVISE SURVEILLANCE REQUIREMENTS INCLUDED IN THE SURVEILLANCE FREQUENCY CONTROL PROGRAM (EPID L-2023-LLA-0104) DATED AUGUST 7, 2024

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**ADAMS Accession No. ML24164A251**

\*concurrence via email

OFFICE	NRR/DORL/LPL4/PM*	NRR/DORL/LPL4/LA*	NRR/DSS/STSB/BC*
NAME	JDrake	PBlechman	SMehta
DATE	6/12/2024	6/13/2024	6/7/2024
OFFICE	OGC*	NRR/DORL/LPL4/BC*	NRR/DORL/LPL4/PM*
NAME	MCarpentier	JRankin	JDrake
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