



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

April 14, 2021

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 – REGULATORY AUDIT  
IN SUPPORT OF REVIEW OF APPLICATION TO ADOPT 10 CFR 50.69,  
“RISK-INFORMED CATEGORIZATION AND TREATMENT OF STRUCTURES,  
SYSTEM, AND COMPONENTS FOR NUCLEAR POWER REACTORS”  
(EPID L-2020-LLA-0279)

Dear Sir or Madam:

By letter W3F1-2020-0047 dated December 18, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20353A433), Entergy Operations, Inc. (the licensee) submitted a license amendment request (LAR) for the Waterford Steam Electric Station, Unit 3 (Waterford 3). The proposed amendment would adopt Title 10 of the *Code of Federal Regulations* Section 50.69 (10 CFR 50.69), “Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors,” into the Waterford 3 licensing basis.

The U.S. Nuclear Regulatory Commission (NRC) staff has identified the need for a regulatory audit to examine the licensee’s non-docketed information with the intent to gain understanding, to verify information, or to identify information that will require docketing to support the basis of the licensing or regulatory decision.

The NRC staff will conduct the audit virtually at NRC Headquarters in Rockville, Maryland, via a licensee-established electronic portal available to NRC staff from approximately April 14, 2021, through June 11, 2021, with formal audit meetings from June 1 to through June 3, 2021. The audit plan, which was discussed with your staff on April 8, 2021, is enclosed with this letter.

If you have any questions, please contact me at (301) 415-1383 or by e-mail at [Perry.Buckberg@nrc.gov](mailto:Perry.Buckberg@nrc.gov).

Sincerely,

**/RA/**

Perry H. Buckberg, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosure:  
Audit Plan

cc: Listserv

REGULATORY AUDIT PLAN  
BY THE OFFICE OF NUCLEAR REACTOR REGULATION TO SUPPORT THE REVIEW OF  
LICENSE AMENDMENT REQUEST  
TO ADOPT 10 CFR 50.69, "RISK-INFORMED CATEGORIZATION AND TREATMENT OF  
STRUCTURES, SYSTEMS AND COMPONENTS FOR NUCLEAR POWER REACTORS"  
ENTERGY OPERATIONS, INC.  
WATERFORD STEAM ELECTRIC STATION, UNIT 3  
DOCKET NO. 50-382

1.0 BACKGROUND

By letter W3F1-2020-0047 dated December 18, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20353A433), Entergy Operations, Inc. (Entergy, the licensee) submitted a license amendment request (LAR) for the Waterford Steam Electric Station, Unit 3 (Waterford 3).

The proposed amendment would adopt Title 10 of the *Code of Federal Regulations* Section 50.69 (10 CFR 50.69), "Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors," into the Waterford 3 licensing basis.

2.0 REGULATORY AUDIT BASES

A regulatory audit is a planned licensing or regulation-related activity that includes the examination and evaluation of primarily non-docketed information. The audit is conducted with the intent to gain understanding, to verify information, and to identify information that will require docketing to support the basis of a licensing or regulatory decision. Performing a regulatory audit is expected to assist the U.S. Nuclear Regulatory Commission (NRC) staff in efficiently conducting its review of the LAR and to gain insights to the licensee's processes and procedures. Information that the NRC staff relies upon to make the safety determination must be submitted on the docket.

The basis of this audit is Entergy's LAR for Waterford Steam Electric Station, and NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR [Light-Water Reactor] Edition," Section 19.2, "Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis: General Guidance," dated June 2007 (ADAMS Accession No. ML071700658).

This audit will be conducted in accordance with the Office of Nuclear Reactor Regulation (NRR) Office Instruction LIC-111, Revision 1, "Regulatory Audits," dated October 2019 (ADAMS Accession No. ML19226A274). An audit was determined to be the most efficient approach toward a timely resolution of issues associated with this LAR review, since the NRC staff will have an opportunity to minimize the potential for multiple rounds of requests for additional

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information and ensure no unnecessary burden will be imposed by requiring the licensee to address issues that are no longer necessary to make a safety determination.

### 3.0 PURPOSE AND SCOPE

The purpose of the audit is to gain a more detailed understanding of the licensee's process to implement risk-informed categorization and treatment of structures, systems and components (SSCs) as proposed in the LAR. The NRC staff will audit internal events and fire probabilistic risk assessment (PRA) and the risk-informed approach implementing 10 CFR 50.69.

The areas of focus for the regulatory audit are the information contained in the licensee's submittal, the enclosed audit information needs, and all associated and relevant supporting documentation (e.g., methodology, process information, calculations, etc.) identified below.

### 4.0 INFORMATION AND OTHER MATERIAL NECESSARY FOR THE AUDIT

The following documentation should be available to the audit team:

1. Applicable peer review reports and closure reports for internal events, internal flooding, fire and seismic PRAs.
2. Available 10 CFR 50.69 SSCs categorization program procedures (i.e., categorization review and adjustment process, decision criteria for Independent Decision-Making Panel, etc.).
3. Uncertainty notebooks for internal events, internal flooding, and fire PRAs related to PRA model assumptions and sources of uncertainty.
4. Documentation of review of PRA model assumptions and sources of uncertainty and identification of key assumptions and sources of uncertainty for the application identified in the LAR.
5. PRA notebooks for the modeling of Diverse and Flexible Mitigation Capability (FLEX) equipment and FLEX human error probabilities, if credited in the PRA.
6. Documentation related to the disposition of open facts and observations.

### 5.0 AUDIT TEAM

The audit will be conducted by NRC staff from NRR, Division of Operating Reactor Licensing (DORL), Plant Licensing Branch 4 (LPL4); Division of Risk assessment (DRA), Probabilistic Risk Assessment Licensing Branches A and C (APLA and APLC); and an NRC contractor from Pacific Northwest National Laboratory (PNNL). Key licensee personnel involved in the development of the LAR should be made available for interactions on a mutually agreeable schedule to respond to any questions from the NRC staff.

#### NRC Staff Team

- Perry Buckberg, NRR/DORL/LPL4
- Mihaela Biro, NRR/DRA/APLA
- Alexander Schwab, NRR/DRA/APLA

- Sunwoo Park, NRR/DRA/APLC
- Steve Alferink, NRR/DRA/APLC
- De Wu, NRR/DRA/APLC
- Mark Wilk, PNNL

## 6.0 LOGISTICS

The NRC staff requests the licensee to have the information discussed in Section 4.0 readily available and accessible for the NRC staff's review via an internet-based portal. The audit will occur via the internet-based portal at NRC Headquarters Office in Rockville, Maryland, from approximately April 14, 2021, through June 11, 2021, with formal audit meetings from June 1, 2021, through June 3, 2021. The NRC staff requests the licensee to have its staff generally available by telephone at mutually agreeable times during regular business hours (e.g., Monday - Thursday, 9:00 a.m. to 4:00 p.m., Eastern Time) while the internet-based portal is open from April 12, through June 11, 2021, if the NRC staff has any questions during the audit related to any information on the portal. The NRC staff requests the licensee to have its staff available by telephone and agreed virtual media during regular business hours during the actual audit week from June 1, through June 3, 2021. The NRC's licensing project manager will inform the licensee via routine communications when the NRC staff no longer needs access to the portal.

## 7.0 SPECIAL REQUESTS

The NRC staff would like access to the documents listed above in Section 4.0 through the online portal that allows the NRC staff and contractors to access documents via the internet. The following conditions associated with the online portal must be maintained throughout the duration that the NRC staff and contractors have access to the online portal:

- The online portal will be password-protected, and separate passwords will be assigned to the NRC staff and contractors who are participating in the audit.
- The online portal will be sufficiently secure to prevent the NRC staff and contractors from printing, saving, downloading, or collecting any information on the online portal.
- Conditions of use of the online portal will be displayed on the login screen and will require acknowledgement by each user.
- Username and password information should be provided directly to the NRC staff and contractors. The NRC project manager will provide Entergy the names and contact information of the NRC staff and contractors who will be participating in the audit. All other communications should be coordinated through the NRC project manager.

## 6.0 DELIVERABLES

An audit summary, which may be public, will be prepared within 90 days of the completion of the audit. If the NRC staff identifies information during the audit that is needed to support its regulatory decision, the staff will issue requests for additional informant to the licensee after the audit.

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(EPID L-2020-LLA-0279) DATED APRIL 14, 2021

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**ADAMS Accession No.: ML21099A002**

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	NRR/DRA/APLA/BC
NAME	PBuckberg	PBlechman	RPascarelli
DATE	4/13/2021	4/13/2021	4/13/2021
OFFICE	NRR/DRA/APLC	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/BC
NAME	SRosenberg	PBuckberg	JDixon-Herrity
DATE	4/13/2021	4/13/2021	4/14/2020

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