



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

July 8, 2020

LICENSEE: Entergy Operations, Inc.

FACILITY: Waterford Steam Electric Station, Unit 3

SUBJECT: SUMMARY OF JUNE 11, 2020, TELECONFERENCE MEETING WITH
ENTERGY OPERATIONS, INC. TO DISCUSS PROPOSED LICENSE
AMENDMENT REQUEST FOR WATERFORD STEAM ELECTRIC STATION,
UNIT 3 REGARDING ADOPTION OF 10 CFR 50.69 (EPID L-2020-LRM-0043)

On June 11, 2020, the U.S. Nuclear Regulatory Commission (NRC) staff held a Category 1 public meeting with representatives from Entergy Operations, Inc. (the licensee) via teleconference. The purpose of the meeting was to discuss a proposed license amendment request (LAR) to adopt Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.69 (10 CFR 50.69), "Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors," for the Waterford Steam Electric Station, Unit 3 (Waterford 3). The meeting notice and agenda, dated May 28, 2020, are available in NRC's Agencywide Documents Access and Management System (ADAMS) under Accession No. ML20149K642. A list of attendees and the meeting presentation material are enclosed.

The licensee presented information regarding its planned LAR to modify the Waterford 3 license to adopt 10 CFR 50.69. Enclosure 2 of this meeting summary contains the presentation slides that the licensee provided to the NRC staff. The licensee plans to submit the LAR in late July 2020 and to request a 12-month review and approval from NRC to support a refueling outage. The licensee gave an overview of its planned submittal, discussed its probabilistic risk assessment (PRA) technical adequacy, and discussed planned exceptions to the Nuclear Energy Institute (NEI) guidance document NEI 00-04, "10 CFR 50.69 SSC [Structure, System, and Component] Categorization Guideline," Revision 0, dated July 2005 (ADAMS Accession No. ML052900163).

The licensee stated that the technical adequacy of its PRA models was previously evaluated by the NRC during the reviews of previous risk-informed LARs related to fire protection and a technical specifications surveillance frequency control program. The licensee provided updates on its PRA that occurred after issuance of these amendments and stated that additional peer reviews and facts and observations closure reviews were conducted. To support an efficient licensing review, the NRC staff encouraged the licensee to provide the complete information on PRA technical adequacy in its planned LAR. The NRC staff also asked if the licensee will provide any PRA sensitivity studies for the categorization process. The NRC staff encouraged the licensee to include a clear overview of the process used for reviewing PRA uncertainties in its planned LAR.

The NRC staff asked the licensee if it was planning to credit FLEX equipment in its PRA and, if so, encouraged the licensee to include the information on FLEX credit in the submittal. The licensee stated that it was planning to credit FLEX in its internal events model but not in the fire

PRA. The NRC staff informed the licensee that the guidance for incipient detection credit provided in National Fire Protection Association Standard 805 Frequently Asked Question No. 08-0046 has been superseded and asked if the licensee's fire PRA model implements the current guidance. In response, the licensee clarified that no incipient detection is credited in its fire PRA model.

The licensee stated that its planned LAR and 10 CFR 50.69 program will follow the guidance in NEI 00-04 except for passive component categorization and seismic considerations. The licensee discussed how passive components and passive functions of active components would be evaluated and mentioned the NRC's prior approval of that planned method for another site. The licensee also stated that its seismic justification as a Tier 1 plant will reference the Electric Power Research Institute Topical Report No. 3002012988, "Alternative Approaches for Addressing Seismic Risk in 10 CFR 50.69 Risk-Informed Categorization," dated July 2018 (this report is not publicly available but can be ordered from www.epri.com). The licensee stated that conclusions and results from existing seismic studies, as they apply to the system being categorized, will be provided to the integrated decision-making panel. The NRC staff discussed requirements for alternative seismic Tier 1 plants that the seismic risk and seismic risk relative to total plant risk must be low. The licensee stated that it is aware of the requirements and plans to follow the process being used by the lead Tier 1 plant (i.e., Calvert Cliffs).

The NRC staff did not make any regulatory decisions or commitments at the meeting. Two members of the public identified themselves on the teleconference but did not have any questions or comments.

Any inquiries can be directed to me at 301-415-0489 or via e-mail at Audrey.Klett@nrc.gov.

Audrey L. Klett, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosures:

1. List of Attendees
2. Meeting Presentation Material

cc: Listserv

Enclosure 1

List of Attendees

LIST OF ATTENDEES

JUNE 11, 2020, TELECONFERENCE MEETING WITH ENTERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

PROPOSED LICENSE AMENDMENT REQUEST TO ADOPT 10 CFR 50.69

U.S. Nuclear Regulatory Commission

Mihaela Biro
Jorge Cintron-Rivera
Jennifer Dixon-Herrity
Fred Forsaty
Bart Fu
Bernard Grenier
Kaihua Hsu
Audrey Klett
Ed Miller
Tony Nakanishi
Sunwoo Park
Robert Pascarelli
Steve Short (NRC contractor with PNNL)
Thomas Wengert
Yuken Wong
De (Wesley) Wu

Entergy Operations, Inc.

Maria Zamber, Waterford 3 (WF3) Regulatory Assurance
Alan Harris, Jensen Hughes
Andy Spotts, Jensen Hughes
Bob Clark, ANO Regulatory Assurance
Cecil (Howard) Mahan, Entergy Corporate Regulatory Assurance
Jessica Walker, Jensen Hughes
Mark Thigpen, WF3 PRA Engineering
Ronald Gaston, Licensing Director, Entergy Corporate Regulatory Assurance
William Steelman, WF3 Design Engineering Manager

Members of the Public

Bob Burg, Engineering Planning and Management (EPM), Inc.
Andrew Burgess, Ameren Missouri
Justin Hiller, Ameren Missouri

Enclosure 2

Meeting Presentation Material

Waterford 3

**10 CFR 50.69 License
Amendment Request**

NRC Pre-submittal Meeting



Participants

Entergy

- Ron Gaston, Director Fleet Regulatory Assurance
- Paul Wood, Waterford 3 Manager, Regulatory Assurance
- Billy Steelman, Waterford 3 Manager, Design Engineering
- Maria Zamber, Waterford 3 Regulatory Assurance
- Richard French, Waterford 3 Project Manager
- Mark Thigpen, Waterford 3 PRA Engineer
- Alan Harris, Jensen Hughes, Licensing Consultant
- Andy Spotts, Jensen Hughes, PRA Consultant

Agenda

- ✓ Introduction/Opening Remarks
- ✓ Waterford 10 CFR 50.69 Overview
 - ✓ PRA Technical Adequacy
 - ✓ Deviations from NEI 00-04
 - ✓ Passive Categorization
 - ✓ Seismic Treatment
- ✓ Schedule
- ✓ Closing Remarks

Waterford 10 CFR 50.69 Overview

- ✓ LAR and Program follow NEI 00-04 (exceptions noted on later slides)
- ✓ 12 month approval requested

PRA Technical Adequacy

- ✓ Internal Events (Including Flooding and Fire)
 - ✓ Probabilistic Risk Assessment (PRA) model technical adequacy previously evaluated by the NRC for TSTF-425 and NFPA 805.
 - ✓ Facts & Observations (F&O) closure peer review performed in October 2017 in accordance with the NEI 05-04 Appendix X approach.
 - ✓ Additional updates/upgrades have been peer reviewed. A Flood and LERF Peer Review was conducted in August 2019.
 - ✓ Changes to the as-built, as-operated plant are reviewed periodically to determine if model impacts require an off-cycle update.
 - ✓ Sensitivity studies will be performed in accordance with NEI 00-04 for areas such as Human Reliability Analysis (HRA) and Common Cause Failures (CCF).
 - ✓ Additional sensitivity studies will be performed to address applicable uncertainties associated with specific system(s) being categorized.

Passive Categorization

- ✓ Passive components and the passive function of active components will be evaluated using the Arkansas Nuclear One (ANO) Risk-Informed Repair/Replacement Activities (RI-RRA) method.
- ✓ The use of this method was previously approved by the NRC in the Vogtle 10 CFR 50.69 application.
- ✓ ASME Code Class 1 SSCs with a pressure retaining function, as well as supports, will be assigned as high safety significant (HSS) for passive categorization. This will result in HSS for its risk-informed safety classification and cannot be changed by the integrated decision-making panel (IDP).

Deviations from NEI 00-04

Seismic Justification Referencing EPRI TR 3002012988

- ✓ Waterford 3 will reference EPRI Technical Report (3002012988) for seismic considerations in the categorization process.
- ✓ Waterford 3 will document justification for being a “Tier 1 Plant” and provide justification to the IDP.
- ✓ Conclusions and results from existing seismic studies, as they apply to the system being categorized, will be included in information provided to the IDP.
- ✓ Waterford 3 will review and incorporate lessons learned and additional considerations from the lead Tier 1 plant, Calvert Cliffs.

Schedule

- LAR Submittal expected by end of July 2020
- Requesting 12 month NRC review and approval to support refueling outage.



Closing Remarks

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DATED JULY 8, 2020

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TWengert, NRR
YWong, NRR
DWu, NRR

ADAMS Accession Nos.:

ML20182A439 (Package);

ML20182A447 (Meeting summary);

ML20182A704 (Presentation)

***by e-mail**

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA*	NRR/DRA/APLA/BC*
NAME	AKlett	PBlechman	RPascarelli
DATE	07/02/2020	07/01/2020	07/02/2020
OFFICE	NRR/DORL/LPL4/BC*	NRR/DORL/LPL4/PM	
NAME	JDixon-Herrity (SLee for)	AKlett	
DATE	07/02/2020	07/08/2020	

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