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

January 15, 2021

LICENSEE: Entergy Operations, Inc.

FACILITY: Waterford Steam Electric Station, Unit 3

SUBJECT: SUMMARY OF DECEMBER 15, 2020, CATEGORY 1 PUBLIC PRE-APPLICATION MEETING WITH ENTERGY OPERATIONS, INC. REGARDING PROPOSED LICENSE AMENDMENT REQUEST TO RELOCATE SPECIFIC TECHNICAL SPECIFICATIONS FOR WATERFORD STEAM ELECTRIC STATION, UNIT 3 (EPID L-2020-LRM-0109)

On December 15, 2020, the U.S. Nuclear Regulatory Commission (NRC) staff held a virtual Category 1 public meeting with representatives from Entergy Operations, Inc. (the licensee) and its contractors. The purpose of the meeting was to discuss the licensee's plans to submit a license amendment request for the Waterford Steam Electric Station, Unit 3, regarding relocating specific technical specifications (TSs) to the Technical Requirements Manual (TRM). The meeting notice and agenda, dated December 3, 2020, are available in the NRC's Agencywide Documents Access and Management System (ADAMS) under Accession No. ML20339A391. Enclosure 1 is a list of attendees.

During the meeting, the licensee presented its plans to submit a license amendment request, which, if approved, would remove TS 3.3.3.7.1, "Chlorine Detection System," TS 3.3.3.7.3, "Broad Range Gas Detection," and Surveillance Requirement 4.7.6.1.d.4 from TS 3.7.6.1, "Control Room Emergency Air Filtration System," and relocate these TSs to the TRM. The licensee's presentation is Enclosure 2. The licensee provided an overview of the broad range gas and chlorine monitors' purpose and TS requirements, and how the monitors respond and alert control room operators upon identification of toxic gases. The licensee also described the related TS surveillance requirement that verifies how the control room emergency air filtration system responds to a toxic gas detection signal. The licensee provided its view of why these TSs can be relocated, which included how the TSs do not meet the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.36, "Technical specifications," for retention in the TSs. The licensee also stated that these TSs are not included in the Standard Technical Specifications.

Section 50.36(c)(2)(ii) of 10 CFR states that a TS limiting condition for operation must be established for each item meeting one or more of the four criteria listed in that regulation. The licensee focused its presentation on Criterion 4 of 10 CFR 50.36(c)(2)(ii), which is "[a] structure, system, or component, which operating experience or probabilistic risk assessment has shown to be significant to public health and safety." The licensee stated that it did not identify any operating experience examples of where the failure of chemical detection had a significant adverse effect on public health and safety. The licensee also stated that its bounding risk assessment, which evaluated the threat of external toxic hazards, showed that the estimated

core damage frequency was approximately 6.5E-8/year, which is considerably less than other analyzed hazard groups. The licensee cited a precedent in its presentation slides.
In response to an NRC staff question during the meeting, the licensee stated that it has no intent to remove the monitors because they are needed to meet licensing basis requirements for responding to a toxic chemical event. The NRC staff informed the licensee that the bases for Standard Technical Specification 3.7.11, "Control Room Emergency Air Cleanup System (CREACS)," in NUREG-1432, Revision 4, "Standard Technical Specifications — Combustion Engineering Plants: Bases" (ADAMS Accession No. ML12102A169), state that the CREACS, which provides protection from smoke and hazardous chemicals to the control room occupants, satisfies Criterion 3 of 10 CFR 50.36(c)(2)(ii) for requiring a TS. Criterion 3 of 10 CFR 50.36(c)(2)(ii) is "[a] structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier." In addressing this criterion, the NRC staff requested the licensee to distinguish between dose-initiated and toxic gas-initiated events.

The NRC staff asked the licensee if its application would include defense-in-depth elements in addition to a discussion of risk insights. In response to the NRC staff question, the licensee stated that the monitors were not modeled in its probabilistic risk assessment because of their low risk, and the licensee performs periodic surveys to identify hazardous chemicals near the site. In response to NRC staff questions, the licensee confirmed that the TRM is included in the Updated Final Safety Analysis Report by reference, and the monitors will continue to automatically isolate the main control room, and the main control room alarms will be maintained if the NRC approves the amendment.

The NRC staff did not make any regulatory decisions or commitments at the meeting. No members of the public identified themselves at the meeting.

Please direct any inquiries to me at 301-415-0489 or by e-mail to Audrey.Klett@nrc.gov.

/RA/

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. Licensee Presentation

cc: Listserv

Enclosure 1

List of Attendees

LIST OF ATTENDEES

DECEMBER 15, 2020, VIRTUAL PUBLIC MEETING

WITH ENTERGY OPERATIONS, INC., ET AL.

WATERFORD STEAM ELECTRIC STATION, UNIT 3,

PRE-APPLICATION MEETING TO RELOCATE SPECIFIC TECHNICAL SPECIFICATIONS

U.S. Nuclear Regulatory Commission
Drew Childs, Region IV
Jennifer Dixon-Herrity, NRR[1]/DORL[2]/LPL4[3]
Brian Green, NRR/DRO[4]/IOLB[5]
Raul Hernandez, NRR/DSS[6]/SCPB[7]
Steve Jones, NRR/DSS/SCPB
Audrey Klett, NRR/DORL/LPL4
Gursharan Singh, NRR/DEX[8]/EICB[9]
Tarico Sweat, NRR/DSS/STSB[10]
Caroline Tilton, NRR/DSS/STSB
Justin Vazquez, NRR/DRO/IOLB
Brian Wittick, NRR/DSS/SCPB

Members of the Public
None introduced

Entergy Operations, Inc.
Philip Couture III
Remy DeVoe
Richard French
Ronald Gaston
Michelle Groome
Wesley Johnson
Howard (Cecil) Mahan
John Schrage
William Steelman
Paul Wood

Jensen Hughes, Inc.
Alan Harris
Andrew Spotts

[1] Office of Nuclear Reactor Regulation
[2] Division of Operating Reactor Licensing
[3] Plant Licensing Branch IV
[4] Division of Reactor Oversight
[5] Operator Licensing and Human Factors Branch
[6] Division of Safety Systems
[7] Containment and Plant Systems Branch
[8] Division of Engineering and External Hazards
[9] Instrumentation and Controls Branch
[10] Technical Specifications Branch

Enclosure 2

Licensee Presentation

Waterford 3

Relocate Toxic Gas Monitoring Technical Specifications to Technical Requirements Manual License Amendment Request

NRC Pre-submittal Meeting

December 15, 2020

Entergy®

Participants

Entergy

- Phil Couture, Manager, Fleet Licensing Programs
- Paul Wood, Manager, Waterford 3 Regulatory Assurance
- Billy Steelman, Manager, Waterford 3 Design Engineering
- Richard French, Project Manager, Waterford 3
- Wesley Johnson, Supervisor, Corporate PRA
- Michelle Groome, Supervisor, Waterford 3 System Engineering
- Remy Devoe, Waterford 3 Regulatory Assurance
- Alan Harris, Jensen Hughes, Licensing Consultant
- Andy Spotts, Jensen Hughes, PRA Consultant

Agenda

- ✓ Introduction/Opening Remarks
- ✓ Waterford 3 LAR Overview
  - ✓ Systems Overview
    - ✓ Broad Range Gas Monitors
    - ✓ Chlorine Monitors
  - ✓ Technical Specifications (TS) to Relocate to Technical Requirements Manual (TRM)
  - ✓ Other TS affected
- ✓ Basis for Change
- ✓ Open Discussion
- ✓ Closing Remarks

Waterford 3 LAR Overview

Systems Overview

- ✓ Broad Range Gas Monitors
  - ✓ 2 BRGMs continuously monitor for large variety of toxic gases.
  - ✓ Located in intake ducting
  - ✓ Sounds alarm and auto isolates control room
- ✓ Chlorine Monitors
  - ✓ 2 Chlorine monitors located near normal outside air intake
  - ✓ Sounds alarm and auto isolates control room

TS to Relocate to TRM

- ✓ TS 3.3.3.7.1 – Chlorine Detection System

  Two independent chlorine detection systems, with their alarm/trip setpoints adjusted to actuate at a chlorine concentration of less than or equal to 2 ppm, shall be OPERBLE.

- ✓ TS 3.3.3.7.3 – Broad Range Gas Detection

  Two independent broad range gas detection systems shall be OPERABLE with their alarm/trip setpoints adjusted to actuate at the lowest achievable Immediately Dangerous to Life or Health gas concentration level of detectable toxic gases providing reliable operation'

Other TS Affected

- ✓ TS 3.7.6.1 – Control Room Emergency Air Filtration System

  Delete Surveillance Requirement 4.7.6.1.d.4.

  Verifying that on a toxic gas detection signal, the system automatically switches to the isolation mode of operation, except for dampers and valves that are locked, sealed, or otherwise secured in the actuated position in Modes 5, 6, or defueled.

.

Basis for Change

Relocation of TS 3.3.3.7.1 and 3.3.3.7.3

Chemical detection system TS do not meet the 10 CFR 50.36 requirements for retention in TS and are not included in NUREG-1432 Revision 4, “Standard Technical Specifications – Combustion Engineering Plants”.

See following slide for discussion of 4 criterion from 10 CFR 50.36

Deletion of SR 4.7.6.1.4.d.

Redundant to the channel functional test currently required by SR 4.3.3.7.3 that verifies the control room ventilation isolates on high toxic gas signal.

No corresponding SR in NUREG-1432 Revision 4

Basis for Change

10 CFR 50.36(c)(2)(ii) Criteria (paraphrased)

Criterion 1 – instrumentation indicating degradation of the reactor coolant pressure boundary

Criterion 2 – initial condition of design basis accident and transient analyses

Criterion 3 – part of primary success path to mitigate design basis accident or transient challenging integrity of fission product barrier

Criterion 4 – operating experience (OE) or probabilistic risk assessment (PRA) shows significance to public health and safety

Discussion focused on Criterion 4

- No OE examples where failure of chemical detection had significant adverse effect on public health and safety
- Bounding risk assessment evaluating the threat of external toxic hazards performed. CDF estimated is range of 6.5E-8/year, which is considerably less than other analyzed hazard groups.

Precedence

Limerick:

ML19213A246 – August 1, 2019

Submitted License Amendment Request to remove Chemical Detection Systems from the Technical Specifications including:

- Chlorine Detection System 3/4.3.7.8.1
- Toxic Gas Detection System 3/4.7.8.2
- Surveillance Requirement 4.7.2.1.e.2

ML19345D984 – March 11, 2020

NRC approved request to relocate these Technical Specifications to the Technical Requirements Manual.

Next Steps

Submittal date:

December 30, 2020

Request approval by:

January 30, 2022

Open Discussion

Questions

Closing Remarks

SUBJECT: SUMMARY OF DECEMBER 15, 2020, CATEGORY 1 PUBLIC PRE-APPLICATION MEETING WITH ENTERGY OPERATIONS, INC. REGARDING PROPOSED LICENSE AMENDMENT REQUEST TO RELOCATE SPECIFIC TECHNICAL SPECIFICATIONS FOR WATERFORD STEAM ELECTRIC STATION, UNIT 3 (EPID L-2020-LRM-0109) DATED JANUARY 15, 2021

DISTRIBUTION:

PUBLIC
RidsACRS_MailCTR Resource
RidsNrrDexEicb Resource
RidsNrrDorl Resource
RidsNrrDorlLpl4 Resource
RidsNrrDroIolb Resource
RidsNrrDssScpb Resource
RidsNrrDssStsb Resource
RidsNrrLAPBlechman Resource
RidsNrrPMWaterford Resource
RidsRgn4MailCenter Resource
LBetancourt, NRR
CDeMessieres, NRR
RMurray, NRR
BGreen, NRR
RHernandez, NRR
SJones, NRR
GSingh, NRR
TSweat, NRR
CTilton, NRR
JVazquez, NRR
MMcCoppin, OEDO NRR
RSkokowski, OEDO, RIV
SBurnell, OPA
DChilds, RIV

ADAMS Accession Nos.:
ML21012A200 (Package);
ML21012A202 (Summary);
ML21012A198 (Presentation)

*by e-mail

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	NRR/DEX/EICB/BC*	NRR/DRO/IOLB/BC*
NAME	AKlett	PBlechman	MWaters	CCowdrey
DATE	01/14/2021	01/13/2021	01/14/2021	01/14/2021
OFFICE	NRR/DSS/SCPB/BC*	NRR/DSS/STSB/BC*	NRR/DORL/LPL4/BC*	NRR/DORL/LPL4/PM
NAME	BWittick	VCusumano	JDixon-Herrity (PBuckberg for)	AKlett
DATE	01/13/2021	01/11/2021	01/15/2021	01/15/2021

OFFICIAL RECORD COPY