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

February 18, 2022

Mr. Fadi Diya
Senior Vice President and
Chief Nuclear Officer
Ameren Missouri
Callaway Energy Center
8315 County Road 459
Fulton, MO 65077

SUBJECT: CALLAWAY PLANT, UNIT NO. 1 – REGULATORY AUDIT PLAN AND SETUP OF ONLINE REFERENCE PORTAL FOR LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATIONS TO ADOPT TSTF-505, REVISION 2 AND TSTF-439, REVISION 2 (EPID L-2021-LLA-0197)

Dear Mr. Diya:

By application dated October 21, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21294A393), as supplemented by letter dated November 24, 2021 (ADAMS Accession No. ML21328A182), Union Electric Company, dba Ameren Missouri (the licensee), submitted a license amendment request (LAR) for Callaway Plant, Unit No. 1 (Callaway). The proposed amendment would modify the Callaway Technical Specifications (TSs) to implement risk-informed completion times and the Risk-Informed Completion Time Program in accordance with Technical Specifications Task Force (TSTF) Traveler TSTF-505, "Provide Risk-Informed Extended Completion Times – RITSTF [Risk-Informed TSTF] Initiative 4b," Revision 2. In support of the adoption of TSTF-505, the licensee also would adopt TSTF-439, Revision 2, "Eliminate Second Completion Times Limiting Time from Discovery of Failure to Meet an LCO [Limiting Condition for Operation]," which involves the elimination of second completion times currently specified in the TSs. In addition, the proposed amendment would remove obsolete one-time completion times contained in the Callaway TSs.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's LAR and determined that a regulatory audit would assist in the timely completion of the review. The NRC staff will conduct a regulatory audit to support its review in accordance with the enclosed audit plan. A regulatory audit is a planned activity that includes the examination and evaluation of primarily non-docketed information

To improve the efficiency of the NRC staff reviews, the licensee's representatives and the NRC staff have discussed having an audit using an online reference portal. The NRC staff plans to initially conduct a review of the documentation provided on the portal. The audit meeting with the licensee is scheduled for March 22–25, 2022. The online reference portal would allow the NRC staff to audit documents referenced in the request to determine whether the information included in the documents is necessary to reach a safety conclusion on the proposed amendment. The licensee will be formally requested to submit information needed to reach a

safety conclusion on the NRC docket. Use of the online reference portal is acceptable as long as the following conditions are met:

- The online reference portal will be password-protected, and passwords will be assigned to those directly involved in the review on a need-to-know basis;
- The online reference portal will be sufficiently secure to prevent NRC staff and contractors from printing, saving, or downloading any documents; and
- Conditions of use of the online reference portal will be displayed on the login screen and will require concurrence by each user.

The NRC staff would like to request that the portal be populated with the documents listed in the attachment to the enclosure to this letter. This is the initial list identified by the NRC staff. The NRC staff may request additional documents during the review via email. Please provide the NRC staff with access to the portal and send me the information needed for access, such as username and password, as soon as possible. The conditions associated with the online reference portal must be maintained throughout the duration of the audit. Please provide written confirmation that Ameren Missouri agrees to the terms and conditions set forth in this letter.

If you have any questions, please contact me at 301-415-8371 or via e-mail at Mahesh.Chawla@nrc.gov.

Sincerely,

/RA/

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

Docket No. 50-483

Enclosure:
Regulatory Audit Plan

cc: Listserv

REGULATORY AUDIT PLAN

TO SUPPORT REVIEW OF LICENSE AMENDMENT REQUEST TO

REVISE TECHNICAL SPECIFICATIONS TO ADOPT TSTF-505, REVISION 2

AND TSTF-439, REVISION 2

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNIT 1

DOCKET NO. 50-483

1.0 BACKGROUND

By application dated October 21, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21294A393), as supplemented by letter dated November 24, 2021 (ADAMS Accession No. ML21328A182), Union Electric Company, dba Ameren Missouri (the licensee), submitted a license amendment request (LAR) for Callaway Plant, Unit No. 1 (Callaway). The proposed amendment would modify the Callaway Technical Specifications (TSs) to implement risk-informed completion times and the Risk-Informed Completion Time (RICT) program in accordance with Technical Specifications Task Force (TSTF) Traveler TSTF-505, "Provide Risk-Informed Extended Completion Times – RITSTF [Risk-Informed TSTF] Initiative 4b," Revision 2. In support of the adoption of TSTF-505, the licensee also would adopt TSTF-439, Revision 2, "Eliminate Second Completion Times Limiting Time from Discovery of Failure to Meet an LCO [Limiting Condition for Operation]," which involves the elimination of second completion times currently specified in the TSs. In addition, the proposed amendment would remove obsolete one-time completion times contained in the Callaway TSs.

2.0 REGULATORY AUDIT BASES, SCOPE, AND METHODOLOGY

A regulatory audit is a planned license or regulation-related activity that includes the examination and evaluation of primarily non-docketed information. The audit is conducted to further identify material the U.S. Nuclear Regulatory Commission (NRC) staff may determine is warranted on the docket to support the basis of a licensing or regulatory decision. Performing a regulatory audit is expected to assist the NRC staff in efficiently conducting its review of the LAR and to gain insights on 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 remote audit is to support the NRC staff review of the licensee's LAR for Callaway, 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).

The remote audit will be performed consistent with NRC Office of Nuclear Reactor Regulation (NRR) Office Instruction LIC-111, Revision 1, "Regulatory Audits," dated October 31, 2019 (ADAMS Accession No. ML19226A274). The NRC staff plans to initially conduct a desk audit to review the documentation provided on the portal. The audit meeting with the licensee is scheduled for March 22–25, 2022. 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 information (RAIs) and ensure that no unnecessary burden will be imposed by requiring the licensee to address issues that are no longer necessary to make a safety determination. Audit review items include the following:

- Understand how the licensee's proposed program implements the risk-informed application and conforms to NRC-endorsed Nuclear Energy Institute (NEI) guidance in NEI 06-09, Revision 0-A, "Risk-Informed Technical Specifications Initiative 4b, Risk-Managed Technical Specifications (RMTS) Guidelines," November 2006 (ADAMS Accession No. ML12286A322)..

- Gain a better understanding of the detailed calculations, analyses, and bases underlying the LAR and confirm the NRC staff's understanding of the LAR.

- Gain a better understanding of plant design features and their implications for the LAR.

- Identify any information needed to enable the NRC staff's evaluation of the technical acceptability of the probabilistic risk assessment (PRA) used for this application.

- Identify any information needed to enable the NRC staff's evaluation of whether the proposed changes challenge design-basis functions or adversely affect the capability or capacity of plant equipment to perform design-basis functions.

- Identify any information needed to enable the NRC staff's evaluation of diverse means for instrumentation and controls functions.

- Identify questions and requests that may become formal RAIs per NRR Office Instruction LIC-115, "Processing Requests for Additional Information," Revision 1, dated August 9, 2021 (ADAMS Accession No. ML21141A238).

3.0 INFORMATION AND OTHER MATERIALS NECESSARY FOR THE REMOTE REGULATORY AUDIT

The NRC staff will request information as needed. The NRC staff will use an "audit items list" to identify the information (e.g., methodology, process information, and calculations) to be audited and the subjects of requested interviews and meetings. The NRC staff requests the licensee to have the requested audit information listed in the audit document request to be readily available and accessible for the NRC staff's review via a web-based portal.

The NRC staff requests the licensee to have the information referenced in the Attachment to this audit plan available and accessible for the NRC staff's review via an online reference portal as soon as feasible within few days of the issuance of this audit plan. The NRC staff requests that any supplemental information requested be available and accessible for the NRC staff's

review at the licensee's earliest possible date from the date of the NRC's notification to the licensee of the new requests.

The licensee should be prepared to provide the following examples and demonstrations during the audit:

- Demonstration of the risk monitor tool
- Example of an RICT calculation
- Example of PRA functional definition, development, and use
- Example of Risk Management Action determination
- Modeling of the instrumentation and controls LCOs in the PRA

The NRC staff will audit the PRA methods that the licensee plans to use to determine the risk impact, including the licensee assessments of internal events (including internal flooding) and fire PRAs. The NRC staff will also audit the licensee's quantification of risk from significant external events, whether the licensee uses PRA or bounding methods, and the licensee's evaluation of defense-in-depth. The NRCc audit team is identified in Section 4.0.

4.0 AUDIT TEAM

Division	Branch	NRR Staff/ Contractor	Title	Email
DORL[1]	LPL4[2]	Mahesh Chawla	Project Manager	Mahesh.Chawla@nrc.gov
		Dennis Galvin	Project Manager (Backup)	Dennis.Galvin@nrc.gov
DRA[3]	APLA[4]	Adrienne Brown (Integrated Review Team Lead)	Senior Reliability and Risk Analyst	Adrienne.Driver@nrc.gov
		April Pulvirenti	Reliability and Risk Analyst	April.Pulvirenti@nrc.gov
		Jeff Circle	Senior Reliability and Risk Analyst	Jeff.Circle@nrc.gov
	APLC[5]	De Wu	Reliability and Risk Analyst	De.Wu@nrc.gov
		Keith Tetter	Reliability and Risk Analyst	Keith.Tetter@nrc.gov
DSS[6]	STSB[7]	Andrea Russell	Safety and Plant Systems Engineer	Andrea.Russell@nrc.gov
	SCPB[8]	Chang Li	Senior Safety and Plant Systems Engineer	Chang.Li@nrc.gov
		Derek Scully	Reactor Systems Engineer	Derek.Scully@nrc.gov
	SNSB[9]	Summer Sun	Senior Nuclear Engineer	Summer.Sun@nrc.gov
DEX[10]	EEEB[11]	Edmund Kleeh	Electrical Engineer	Edmund.Kleeh@nrc.gov
		Nadim Khan	Electrical Engineer	Nadim.Khan@nrc.gov
	EICB[12]	Ming Li	Electronics Engineer	Ming.Li@nrc.gov
		William Roggenbrodt	Electronics Engineer	William.Roggenbrodt@nrc.gov
	EMIB[13]	Kaihwa Hsu	Senior Mechanical Engineer	Kaihwa.Hsu@nrc.gov
PNNL[14]		Garill Coles	Contractor	Garill.Coles@pnnl.gov

[1] Division of Operating Reactor Licensing
[2] Plant Licensing Branch IV
[3] Division of Risk Assessment
[4] Probabilistic Risk Assessment Licensing Branch A
[5] Probabilistic Risk Assessment Licensing Branch C
[6] Division of Safety Systems
[7] Technical Specifications Branch
[8] Containment and Plant Systems Branch
[9] Nuclear Systems Performance Branch
[10] Division of Engineering and External Hazards
[11] Electrical Engineering Branch
[12] Instrumentation and Controls Branch
[13] Mechanical Engineering and Inservice Testing Branch
[14] United States Department of Energy Pacific Northwest National Laboratory (PNNL)

5.0 SPECIAL REQUESTS

The NRC requests access to requested documents and information through a web-based portal that allows the NRC staff and contractors to access documents over the internet. The following conditions associated with the online portal must be maintained while the NRC staff and contractors have access to the online portal:

- The online portal will be password-protected. A separate password will be assigned to each member of the NRC staff and NRC contractors participating in the audit.

- The online portal will prevent the NRC participants from printing, saving, downloading, or collecting any information directly from the online portal.

- Conditions of use of the online portal will be displayed on the login screen and will require acknowledgment by each user.

Username and password information should be provided directly to members of the NRC staff and contractors. The NRC licensing project manager will provide the licensee with the names and contact information of the NRC staff and contractors participating in the audit. All other communications should be coordinated through the NRC project manager.

6.0 DELIVERABLES

The NRC staff would like access to the documents requested through the online reference portal that allows the NRC staff and contractors to access documents remotely by February 25, 2022. The NRC staff and contractor access to the online portal should be terminated by June 30, 2022. The NRC staff will issue an audit summary report within 90 days of the completion of the audit. The NRC staff will develop any RAIs, as needed, consistent with the guidance in NRR Office Instruction LIC-115, Revision 1, and issue such RAIs separately from audit-related correspondence.

Attachment:
Requested Audit Materials List

REQUESTED AUDIT MATERIALS LIST

ITEM	AUDIT DOCUMENT REQUEST
1	PRA-IE-UNCERT_APP5, “Disposition of Key Uncertainties: Risk Informed Completion Times (RITS 4b),” Revision 1, June 2021
2	Callaway Plant Procedure PRA-ZZ-00001, “PRA [Probabilistic Risk Assessment] Model Updates and Maintenance,” Revision 002
3	Callaway Plant Procedure PRA-ZZ-00002, “Risk Monitoring Software Configuration Control,” Revision 000
4	CEC Procedure, ODP-ZZ-00002, APP 2, “Risk Management Actions for Planned Risk Significant Activities,” Revision 019
5	CEC Procedure, ODP-ZZ-00002, APP 3, “Risk Management Actions for Fire Risk Systems and Components,” Revision 003
6	Procedure, APA-ZZ-00315, “Configuration Risk Management Program,” Revision 015.
7	Internal Events Probabilistic Analysis (IEPRA) System Notebook for Containment Cooling and Spray
8	IEPRA System Notebook for Engineered Safety Function Actuation System
9	IEPRA System Notebook for Main Feedwater and Main Turbine
10	Any risk-informed completion time (RICT) program procedures such as for: • RICT Program • Risk Management Support of RICT • Calculation of Risk Management Action Tracking and RICT • Performance Monitoring
11	Applicable plant design and operation documentation as they pertain to audit question responses: • System, off-normal, and emergency operating procedures • Flow diagrams • One-line diagrams – main for plant alternating current (AC) distribution system, safety related buses, including AC and direct current (DC), 120-volt alternating current (VAC) vital buses, and diesel generators (DGs) • Schematics • Piping and instrumentation diagrams • Procedure(s) for loss of one safety AC or DC bus
12	Electrical presentation on the following: • Normal and emergency lineups (two offsite sources or DGs) • Shared loads between electrical system trains or divisions • Main AC safety buses at medium and low voltage levels (not motor control centers including DC safety buses) • Proposed electrical technical specification changes and license amendment request Table E1-1 on minimum AC or DC sources to facilitate the RICT program

SUBJECT: CALLAWAY PLANT, UNIT NO. 1 – REGULATORY AUDIT PLAN AND SETUP OF ONLINE REFERENCE PORTAL FOR LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATIONS TO ADOPT TSTF-505, REVISION 2 AND TSTF-439, REVISION 2 (EPID L-2021-LLA-0197) DATED FEBRUARY 18, 2022

DISTRIBUTION:

PUBLIC
PM File Copy
RidsACRS_MailCTR Resource
RidsNrrDorlLpl4 Resource
RidsNrrDexEeeb Resource
RidsNrrDexEicb Resource
RidsNrrDexEmib Resource
RidsNrrDraApla Resource
RidsNrrDraAplc Resource
RidsNrrDssScpb Resource
RidsNrrDssSnsb Resource
RidsNrrDssStsb Resource
RidsNrrLAPBlechman Resource
RidsNrrPMCallaway Resource
RidsRgn4MailCenter Resource
ABrown, NRR
ARussell, NRR
APulvirenti, NRR
CLi, NRR
DWu, NRR
DScully, NRR
EKleeh, NRR
JCircle, NRR
KHsu, NRR
KTetter, NRR
MLi, NRR
NKhan, NRR
SSun, NRR
WRoggenbrodt, NRR
GWerner,RIV
DBradley, RIV
SJanicki, RIV

ADAMS Accession No.: ML22048A002 ***concurrence via e-mail**

OFFICE	NRR/DORL/LPL4/PM*	NRR/DORL/LPL4/LA*	NRR/DRA/APLA/BC*	NRR/DRA/APLC/BC*
NAME	MChawla	PBlechman	RPascarelli	SRosenberg (SVasavada for)
DATE	2/16/2022	2/17/2022	2/14/2022	2/14/2022
OFFICE	NRR/DSS/SCPB/BC(A)*	NRR/DSS/SNSB/BC*	NRR/DSS/STSB/BC*	NRR/DEX/EICB/BC*
NAME	SJones	SKrepel (CPeabody for)	VCusumano	MWaters
DATE	2/10/2022	2/14/2022	2/9/2022	2/16/2022
OFFICE	NRR/DEX/EEEB/BC*	NRR/DEX/EMIB/BC(A)*	NRR/DORL/LPL4/BC*	NRR/DORL/LPL4/PM*
NAME	WMorton	ITseng	JDixon-Herrity (TWengert for)	MChawla
DATE	2/14/2022	2/16/2022	2/18/2022	2/18/2022

OFFICIAL RECORD COPY