



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

October 21, 2022

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

SUBJECT: CALLAWAY PLANT, UNIT NO. 1 - EXEMPTIONS FROM THE REQUIREMENTS OF 10 CFR 50.46 AND 10 CFR PART 50, APPENDIX A, GENERAL DESIGN CRITERIA 35, 38, AND 41 (EPID L-2021-LLE-0021)

Dear Mr. Diya:

The U.S. Nuclear Regulatory Commission (NRC) has approved the enclosed exemptions from specific requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors," and 10 CFR Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," General Design Criterion (GDC) 35, "Emergency core cooling"; GDC 38, "Containment heat removal"; and GDC 41, "Containment atmosphere cleanup," for Callaway Plant, Unit No. 1. This action is in response to your application dated March 31, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21090A184), as supplemented by letters dated May 27, 2021, July 22, 2021, August 23, 2021, October 7, 2021, January 27, 2022, March 8, 2022, May 26, 2022, and September 8, 2022 (ML21147A222, ML21203A192, ML21237A135, ML21280A378, ML22027A804, ML22068A027, ML22146A337, and ML22251A343, respectively). Union Electric Company, dba Ameren Missouri (the licensee), requested exemptions pursuant to 10 CFR 50.12, "Specific exemptions," to allow use of a risk-informed methodology instead of the traditional deterministic methodology; to resolve the concerns associated with Generic Safety Issue (GSI)-191, "Assessment of Debris Accumulation on PWR [Pressurized Water Reactor] Sump Performance"; and respond to Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized Water Reactors," dated September 13, 2004 (ML042360586).

As part of the actions to resolve concerns associated with GSI-191, the NRC issued GL 2004-02 to holders of operating licenses for PWRs. In GL 2004-02, the NRC staff requested that licensees perform an evaluation of their emergency core cooling system (ECCS) and containment spray system (CSS) recirculation functions considering the potential for debris-laden coolant to be circulated by the ECCS and the CSS after a loss-of-coolant accident or high energy line break inside containment and, if appropriate, take additional actions to ensure system function. GL 2004-02 required that licensees provide a written response to the NRC, pursuant to 10 CFR 50.54(f), describing the results of their evaluation and any modifications made, or planned, to ensure the ECCS and CSS remain functional.

F. Diya

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The exemptions are being forwarded for publication to the Office of the Federal Register.

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

Sincerely,

/RA Siva Lingam for/

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

Docket No. 50-483

Enclosure:
Exemptions

cc: Listserv

ENCLOSURE

EXEMPTIONS FROM THE REQUIREMENTS OF 10 CFR 50.46 AND
10 CFR PART 50, APPENDIX A, GENERAL DESIGN CRITERIA 35, 38 AND 41

ASSOCIATED WITH GSI-191 AND GL 2004-02

UNION ELECTRIC COMPANY DBA AMEREN MISSOURI

CALLAWAY PLANT, UNIT NO. 1

DOCKET NO. 50-483

SUBJECT: CALLAWAY PLANT, UNIT NO. 1 - EXEMPTIONS FROM THE REQUIREMENTS OF 10 CFR 50.46 AND 10 CFR PART 50, APPENDIX A, GENERAL DESIGN CRITERIA 35, 38, AND 41 (EPID L-2021-LLE-0021) DATED OCTOBER 21, 2022

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ADAMS Accession Nos.

LETTER: ML22220A130

EXEMPTIONS: ML22220A131

FRN: ML22220A129 (not included)

***by email**

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