



March 31, 2021

ULNRC-06645

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

10 CFR 50.46

Ladies and Gentlemen:

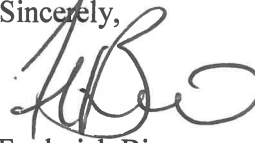
**DOCKET NUMBER 50-483  
CALLAWAY PLANT UNIT 1  
UNION ELECTRIC CO.  
RENEWED FACILITY OPERATING LICENSE NPF-30  
ECCS EVALUATION MODEL REVISIONS**

Ameren Missouri hereby submits the annual report required per 10 CFR 50.46(a)(3) for Callaway Plant. Attachment 1 to this letter describes those changes to the Westinghouse ECCS Large Break and Small Break Loss of Coolant Accident (LOCA) Evaluation Models that have been implemented for Callaway during the time period from March 2020 to March 2021. Attachment 2 provides an ECCS Evaluation Model Margin Assessment which accounts for all peak cladding temperature (PCT) changes resulting from the resolution of prior issues as they apply to Callaway. No new PCT penalties are included in these attachments.

References 1 through 15 (listed on page 2 of this letter) provided annual 10 CFR 50.46 reports that were issued after the LOCA analyses were revised to reflect the installation of the replacement steam generators in 2005. The PCT values determined in the Large Break and Small Break LOCA analyses of record, when combined with all PCT margin allocations, remain below the 2200°F regulatory limit. However, in March 2014, Ameren Missouri was informed by Westinghouse that the absolute magnitude of the Large Break Loss of Coolant Accident (LBLOCA) penalty assessments that have accumulated since the current analysis of record (replacement steam generator analysis approved in Callaway License Amendment 168) exceeded 50°F. As such, Reference 9 was submitted within the requirements of 10 CFR 50.46(a)(3)(ii), and contains a commitment to reanalyze the Large Break and Small Break Loss of Coolant Accidents using the NRC-approved version of WCAP-16996-P, "Realistic LOCA Evaluation Methodology Applied to the Full Spectrum of Break Sizes (FULL SPECTRUM LOCA Methodology)." This reanalysis will be completed on a schedule to be determined as part of the 10 CFR 50.46c rulemaking process.

This letter does not contain new commitments. For any questions on this report, please contact Mr. Tom Elwood at (314) 225-1905.

Sincerely,



Frederick Bianco  
Senior Director, Nuclear Operations

JLB/mlp

**References:**

- 1) ULNRC-05260 dated 3-9-06
- 2) ULNRC-05378 dated 3-7-07
- 3) ULNRC-05475 dated 3-4-08
- 4) ULNRC-05600 dated 3-4-09
- 5) ULNRC-05683 dated 3-1-10
- 6) ULNRC-05769 dated 3-1-11
- 7) ULNRC-05840 dated 3-1-12
- 8) ULNRC-05968 dated 3-6-13
- 9) ULNRC-06098 dated 3-25-14
- 10) ULNRC-06203 dated 3-31-15
- 11) ULNRC-06292 dated 3-30-16
- 12) ULNRC-06361 dated 3-30-17
- 13) ULNRC-06428 dated 3-29-18
- 14) ULNRC-06497 dated 3-28-19
- 15) ULNRC-06571 dated 3-31-20

**Attachments:**

1. Changes to the Westinghouse ECCS Evaluation Model and PCT Penalty Assessments
2. ECCS Evaluation Model Margin Assessment for Callaway

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