



Callaway Plant

July 8, 2021

ULNRC-06668

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

Ladies and Gentlemen:

**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
UNION ELECTRIC CO.
RENEWED FACILITY OPERATING LICENSE NPF-30
SPECIAL REPORT 2021-01:
NON-FUNCTIONAL SEISMIC INSTRUMENT FOR GREATER THAN 30 DAYS**

Enclosed is a special report addressing a non-functional seismic monitoring instrument at the Callaway Plant.

This letter does not contain new commitments, and none of the material in this report is considered proprietary by Union Electric Company (Ameren Missouri).

If you have any questions or require additional information, please contact Mr. Thomas Elwood, Supervising Engineer, Regulatory Affairs and Licensing at 314-225-1905.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve J. Meyer".

Steve J. Meyer
Manager, Regulatory Affairs

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Special Report 2021-01

Requirement

Callaway Plant's Final Safety Analysis Report (FSAR) Section 16.3.3.2 specifies requirements for seismic instrumentation. The Limiting Condition for Operation (LCO) specified per FSAR 16.3.3.2 requires seismic monitoring instrumentation to be Functional at all times. With a required instrument non-functional for more than 30 days, Action "a" applies. It states, "With one or more of the above required seismic monitoring instruments non-functional for more than 30 days, prepare and submit a Special Report to the Commission within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to FUNCTIONAL status."

Cause of the Non-functional Seismic Monitoring Instrument

The seismic monitoring instruments require regular calibration at a frequency of at least once per 18 months, as specified per FSAR Surveillance Requirement 16.3.3.2.1.a. For some of the instruments that make up the overall seismic monitoring system, the calibration process involves replacement of the scratch plates for each of those instruments since capturing the as-found condition/data from the used scratch plates and resetting the instrument during its calibration renders the scratch plates unsuitable for re-use.

The problem that now exists with the scratch plates for the affected instruments is that they are obsolete, as they are no longer made by the original equipment manufacturer or the approved refurbisher. Consequently, Ameren Missouri has been developing a plan for the replacement of the current seismic monitoring system with a newer, state-of-the-art, electronic system. In parallel, a plan is also being pursued to potentially procure scratch plates for the affected instruments from a different supplier using a reverse engineering approach for replicating and supplying replacement plates. A supplier has been identified, and they have indicated that they could potentially deliver replacement plates as soon as the fourth quarter of 2021.

Due to the inability to procure replacement plates or install a replacement monitoring system, the maximum calibration surveillance interval for one of the affected instruments, i.e. SGARS0001 and its three included recorders SGARS0001A, Triaxial Response Spectrum Recorder East-West; SGARS0001B, Triaxial Response Spectrum Recorder North-South; and SGARS0001C, Triaxial Response Spectrum Recorder Vertical, expired on June 1, 2021. The recorders were therefore declared non-functional at that time. With the current plates still installed for the triaxial instrument, continued capability exists for the recorders to record seismic event accelerations, but the accuracy is unknown.

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Other, unaffected seismic instruments, i.e., SGAR0005, Containment Structure Peak Recording Accelerometer; SGAR0007, 'B' Steam Generator Piping Peak Recording Accelerometer; and SGAR0008, 'C' Steam Generator Support Peak Recording Accelerometer, provide an alternate means for monitoring a seismic event. These instruments ensure that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those plant features important to safety (thus to determine if plant shutdown is required pursuant to Appendix A of 10 CFR Part 100).

Plans for Restoring the Instrument to FUNCTIONAL status

SGARS0001 will be returned to FUNCTIONAL status when the new seismic monitoring system or new scratch plates have been received and installed.