December 11, 2014

ULNRC-06162

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.
FACILITY OPERATING LICENSE NPF-30
SPECIAL REPORT 2014-05
INOPERABILITY OF LOOSE PARTS MONITORING INSTRUMENT FOR GREATER THAN 30 DAYS

Enclosed is a special report addressing the inoperability of a loose parts monitoring instrument at Callaway Plant.

No new commitments are identified in this correspondence, 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,

Mark McLachlan
Senior Director, Engineering

EMP

Enclosure

cc: Mr. Marc L. Dapas
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
1600 East Lamar Boulevard
Arlington, TX 76011-4511

Senior Resident Inspector
Callaway Resident Office
U.S. Nuclear Regulatory Commission
8201 NRC Road
Steedman, MO 65077

Mr. Fred Lyon
Project Manager, Callaway Plant
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Mail Stop O-8B1
Washington, DC 20555-2738

Index and send hardcopy to QA File A160.0761

Hardcopy:

Certrec Corporation
4150 International Plaza Suite 820
Fort Worth, TX 76109
(Certrec receives ALL attachments as long as they are non-safeguards and may be publicly disclosed.)

Electronic distribution for the following can be made via Responses and Reports ULNRC Distribution:

F. M. Diya
D. W. Neterer
L. H. Graessle
T. E. Herrmann
B. L. Cox
S. A. Maglio
T. B. Elwood
Corporate Communications
NSRB Secretary
STARS Regulatory Affairs
Mr. John O'Neill (Pillsbury Winthrop Shaw Pittman LLP)

Enclosure
ULNRC-06162

Special Report 2014-05

Requirement

Callaway Plant's Final Safety Analysis Report (FSAR) Section 16.3.3.5 contains requirements for reactor coolant system (RCS) loose-part detection instrumentation. The Limiting Condition for Operation (LCO) specified per FSAR 16.3.3.5 requires the loose-part detection system to be Operable in MODES 1 and 2. With a required channel inoperable for more than 30 days, Action A applies. It states, "With one or more Loose-Part Detection System channels inoperable 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 channel(s) to OPERABLE status."

Cause of the Loose-Part Detection Instrument Inoperability

Channel 7 of the Loose-Part Monitoring System (inlet to Steam Generator 'B') was declared inoperable and removed from service on 11/23/2014 due to random signal fluctuations. The channel noise is most likely due to a 60 Hertz signal being coupled onto the signal cable. This caused the system to become overloaded with data and rendered the system, specifically channel 7, unreliable.

Initial investigations have concluded that the channel degradation is likely associated with the accelerometer and hard-line cable which is located inside the bio-shield of the containment building. The instrument will be returned to service in the next refueling outage.

The capability to detect loose metallic parts in the RCS will be retained with the remaining 11 operable channels. The redundant channel on Steam Generator 'B' (channel 8) is Operable. This will provide an alternate means for monitoring the RCS. This instrumentation ensures that sufficient capability is available to detect loose metallic parts in the RCS and avoid or mitigate damage to RCS components.

Plans for Restoring the Instrument to OPERABLE status

Replacement of the accelerometer and/or hard-line cable, as well as post-maintenance testing, will be pursued during the next refueling outage (currently scheduled for March 2016).

The potential for performing an online replacement was considered, but due to limited accessibility and high radiation dose rates required for this job, it was determined that replacement within a refueling outage is more appropriate.