



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

November 29, 2012

LICENSEE: Union Electric Company d/b/a Ameren Missouri  
FACILITY: Callaway Plant, Unit 1  
SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON  
SEPTEMBER 27, 2012, BETWEEN THE U.S. NUCLEAR REGULATORY  
COMMISSION AND UNION ELECTRIC COMPANY (AMEREN MISSOURI),  
CONCERNING REQUESTS FOR ADDITIONAL INFORMATION PERTAINING  
TO THE CALLAWAY PLANT, UNIT 1, LICENSE RENEWAL APPLICATION  
(TAC. NO. ME7708)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Union Electric Company d/b/a Ameren Missouri (the applicant) held a telephone conference call on September 27, 2012, to discuss and clarify the applicant's responses to the staff's requests for additional information (RAIs) concerning the Callaway Plant, Unit 1 (Callaway), license renewal application. The staff also provided clarification to the applicant on draft RAIs and RAIs issued.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a description of the staff concerns discussed with the applicant. A brief description on the status of the items is also included.

The applicant had an opportunity to comment on this summary.

A handwritten signature in black ink, appearing to read "Samuel Cuadrado de Jesús".

Samuel Cuadrado de Jesús, Project Manager  
Projects Branch 1  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-483

Enclosures:

1. List of Participants
2. List of Requests for Additional Information

cc w/encls: Listserv

SUMMARY OF TELEPHONE CONFERENCE CALL  
CALLAWAY  
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS  
September 27, 2012

PARTICIPANTS

AFFILIATIONS

Samuel Cuadrado de Jesús	U.S. Nuclear Regulatory Commission (NRC)
William (Bill) Holston	NRC
Kimberly Green	NRC
Alice Erickson	NRC
Andrew Prinaris	NRC
James (Jim) Medoff	NRC
Sarah Kovaleski	Callaway Plant (Callaway)
Gordon Chen	Callaway
Sharon Merciel	Callaway
Curtis Stundebeck	Callaway
Curtis Wood	Callaway
Eric Blocher	STARS

SUMMARY OF TELEPHONE CONFERENCE CALL  
CALLAWAY  
LICENSE RENEWAL APPLICATION

September 27, 2012

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Union Electric Company d/b/a Ameren Missouri (the applicant) held a telephone conference call on September 27, 2012, to discuss and clarify the following response to requests for additional information (RAIs), draft RAIs (DRAIs), and RAIs issued concerning the Callaway Plant, Unit 1, license renewal application (LRA).

**Draft RAI B2.1.15-4a**

Background:

The response to B2.1.15-4 provided by letter dated August 6, 2012, stated that the fire water storage tanks (FWSTs) are cleaned and inspected on an alternating refueling outage (RFO) frequency and will be recoated prior to the period of extended operation to remove the coating delaminations and prevent them from becoming an impact on the intended function(s) of downstream components. The response also stated that the outlets of the FWSTs consist of 14-inch pipe that extends 3 feet inside the tank and ends in a 90 degree radius elbow turned downward ending 6 inches above the bottom of the tank and therefore, in the event of delamination, this geometry would preclude any large pieces of coating from entering the outlet of the tank and affecting downstream equipment.

The Callaway Addendum to the Final Safety Analysis Report (FSAR), Section 9.5.1.2.1 states, "[t]he FPS water supply is separated from all other site water supply systems and is based on providing 2300 gallons per minute of water for two hours to sprinkler systems with a simultaneous total flow of 1000 gallons per minute to hose stations."

Issue:

While the replacement of the coatings and subsequent inspections are beyond the recommendations in Generic Aging Lessons Learned (GALL) Report aging management program (AMP) XI.M29, the plant-specific operating experience cited in RAI B2.1.15-4 results in the staff requiring further information to ensure that the intended function(s) of the tank and downstream in-scope components will be met during the period of extended operation.

The staff understands that the coatings will be replaced prior to the period of extended operation; however, given past plant-specific operating experience, subsequent delamination of coatings could occur. Neither the fire water system or Aboveground Metallic Tanks Programs nor their FSAR supplements state that the FWSTs will be cleaned and inspected on an alternating RFO frequency, and therefore, the staff cannot conclude that follow-on inspections of the new coatings will occur in order to confirm the lack of delamination.

The fluid velocity corresponding to 3300 gpm in a 14-inch pipe is approximately 7.8 feet per second. Given the six inch clearance to the bottom of the tank, delaminated particles could be carried into the flow stream. The staff lacks sufficient information to determine that downstream components will not be impacted by delaminated coatings.

ENCLOSURE 2

Request:

Revise the fire water system or Aboveground Metallic Tanks Program, and the corresponding FSAR supplement, to indicate the frequency of coating inspections to confirm that delamination of the coatings is not occurring. Alternatively, provide the basis for why the smallest size delaminated particle that could prevent an in-scope intended function from being performed will not be transported from the tank.

**Discussion:** The applicant provided information related to the following sentence on DRAI B2.1.15-4a:

Neither the fire water system or Aboveground Metallic Tanks Programs nor their FSAR supplements state that the FWSTs will be cleaned and inspected on an alternating RFO frequency, and therefore, the staff cannot conclude that follow-on inspections of the new coatings will occur in order to confirm the lack of delamination.

The applicant stated that the LRA, in the Exceptions section of the Aboveground Metallic Tanks Program, states that the FWST are inspected at an alternating RFO frequency. After reviewing the LRA to verify the applicant statement the staff confirmed that the information is provided in the LRA and will remove the above sentence from DRAI B2.1.15-4a. Nevertheless, the staff pointed out to the applicant that the LRA states that "currently" inspections are conducted on an alternating RFO frequency. The response should clearly state what inspections will be conducted in the future after the coatings have been replaced.

The applicant indicated that the remaining portion of the request is clear. This DRAI will be revised and sent as a formal RAI.

**August 9, 2012, Response to RAI B2.1.31-2**

**Discussion:** The staff stated that for the acceptance criteria there was a discrepancy between Callaway's implementing procedures and the Generic Aging Lessons Learned (GALL) Report recommendations for ACI 349.3R-96. The staff stated that although in its response the applicant refers to a commitment to enhance the Structures Monitoring Program to quantify acceptance criteria and critical parameters, that is not enough information for the staff to determine that the applicant's three tier criteria is in accordance with ACI 349.3R.

The applicant stated that it will supplement the RAI response to revise the Structures Monitoring Program enhancement section and the Commitment table in the LRA to note that Callaway will be using the three tier criteria in accordance with ACI 349.3R.

The staff will wait for the applicant to supplement the RAI response.

**August 9, 2012, Response to RAI B2.1.31-4**

**Discussion:** The staff noted that in the RAI response the applicant stated that inspections of the seismic isolation gap will be completed before December 31, 2012, and corrective actions will be completed before December 31, 2017. The staff requested the applicant to explain why the corrective actions couldn't be completed sooner and also to explain the reason for the

five-year gap between the completion of inspections of the seismic gaps and the completion of the corrective actions.

The applicant stated that it needs the time to review the inspection results. The applicant stated that depending on the inspection results it may be able to complete corrective actions immediately but if more extensive corrective actions need to be taken (i.e., a physical plant modification) it may need time to schedule things into the work process. The applicant stated that because it doesn't know what the inspection results would be, it wanted to be sure that it gives itself enough time to complete all actions.

The staff understood that depending on the inspection results the applicant may complete corrective actions immediately or no later than December 31, 2017.

The staff has no concerns with the applicant's response.

**August 9, 2012, Response to RAI B2.1.31-5**

The staff stated that from the applicant response it understood that penetrations, transmission towers, electrical conduits, raceways, cable trays, electrical cabinets/enclosures, and associated anchorages were considered to be part of mechanical and electrical systems. The staff asked the applicant whether these components have been inspected as part of the mechanical and electrical systems. The applicant stated that inspection of those components has been performed as system engineering type walk downs but there is no formal documentation and also at the time the applicant was not following the format and style currently needed for the Structures Monitoring Program. The applicant stated that by December 31, 2017, the baseline inspections of those components will be performed under the Structures Monitoring Program.

The staff asked the applicant to explain why it couldn't complete the baseline inspections sooner (less than five years). The applicant stated that it wants to perform the baseline inspections along with its current scheduled structures inspections. The applicant stated that it would take five years for the applicant to complete its structures monitoring period.

The staff has no concerns with the applicant's response.

**August 9, 2012, Response to RAI B2.1.31-6**

In its response the applicant stated that starting in November 2009 it took monthly groundwater samples for 24 months. In August and September 2010 one well showed high chloride levels and in March and April 2011 another well also was found with high chloride levels. The staff asked the applicant whether the chloride levels had returned to below 500 ppm (non-aggressive groundwater). The applicant stated that those were isolated occurrences and that the chloride levels are back to below 500 ppm.

The staff has no concerns with the applicant's response

**August 9, 2012, Response to RAI B2.1.29-1**

**Discussion:** The staff stated that the scope of the containment leak rate test program includes all containment boundary pressure-retaining components. The staff stated that those penetrations and valve components excluded or exempted from Type B or Type C testing still need to be age managed through an AMP. The staff also stated that for each of those penetrations and valves excluded or exempted from Type B or Type C testing, it needs to know the type of AMP to be used to adequately manage the aging effects.

The applicant stated that the penetrations are Type A tested. The staff stated that a Type A test pressurizes the overall containment or structure and if there is a leak it will be very difficult or impossible for the applicant to isolate where that leak is. The applicant stated that the management of aging effects associated with penetrations is covered by several AMPs in accordance with the GALL Report and that there are no exemptions or exclusions that apply and that the information is in the LRA. The staff understood that the information is in several locations in the LRA however the staff stated that for clarity it would help if the applicant could provide a list of the AMPs that apply to each of the valves and penetrations excluded or exempted from Type B and Type C testing. The applicant understood and agreed to provide the list.

**Action:** The applicant will provide a supplemental response with a list of the AMPs that apply to each of the valves and penetrations excluded or exempted from Type B and Type C testing.

**September 25, 2012, RAI Set 12**

**Discussion:** The staff provided clarification to the applicant for all RAIs in RAI Set 12 issued on September 25, 2012. The applicant understood the staff requests and will provide a response within 30 days of the issuance of RAI Set 12.

November 29, 2012

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Samuel Cuadrado de Jesús, Project Manager  
Projects Branch 1  
Division of License Renewal  
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