

September 18, 2008

Mr. Adam C. Heflin  
Senior Vice President and  
Chief Nuclear Officer  
Union Electric Company  
P.O. Box 620  
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT, UNIT 1 – GENERIC LETTER 2008-01, “MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS,” PROPOSED ALTERNATIVE COURSE OF ACTION (TAC NO. MD7806)

Dear Mr. Heflin:

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, “Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems” (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the “subject systems”) are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the “9-month submittal”) of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the “3-month submittal”) of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

By letter dated April 10, 2008 (ADAMS Accession No. ML081130717), Union Electric Company (the licensee) submitted a 3-month response to GL 2008-01 for Callaway Plant, Unit 1 (Callaway). The NRC staff’s assessment of the response for Callaway is contained in the enclosure.

The NRC staff reviewed the licensee’s proposed alternative course of action and the associated basis for acceptance for completing the system walkdowns for piping that is inside of the containment building during the fall 2008 refueling outage (Refuel 16) is acceptable. However, the licensee’s commitment to provide its initial response for the requested information after October 11, 2008, but within 60 days following the end of the Refuel 16 outage that is planned to begin on October 11, 2008, is more than 11 months after the GL was issued instead of 9 months as specified in the GL. This is not acceptable as explained in the enclosure.

A. Heflin

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Instead of requesting that you submit a 3-month supplemental response for Callaway to revise your proposed alternative course of action related to the content and schedule for your 9-month responses as described in the enclosure, we discussed the 9-month response to the GL with Mr. Tom Elwood, acting assistant manager for Regulatory Affairs and Licensing, on September 16, 2008. In that call, Mr. Elwood stated that a 9-month initial submittal for Callaway is scheduled to be submitted by October 11, 2008. This commitment to meet the 9-month response date of October 11, 2008, addresses our concern with the letter dated April 10, 2008. Therefore, nothing further is requested except the 9-month initial submittal and 9-month supplemental submittal as described above and in the enclosure.

If you have any questions regarding this letter, please feel free to contact me at 301-415-1476.

Sincerely,

/RA by Jack Donohew for/

Mohan C. Thadani, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-483

Enclosure:  
As stated

cc w/encl: See next page

A. Heflin

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OFFICE	DORL/LPL4/PM	DORL/LPL4/LA	DPR/PGCB/BC	DSS/DD	DORL/LPL4/BC(A)	DORL/LPL4/PM
NAME	MThadani JDonohew for	JBurkhardt	MMurphy	JWermiel	JDonohew	MThadani JDonohew for
DATE	09/18/08	08/6/08	09/09/08	08/18/08	09/18/08	09/18/08

**OFFICIAL AGENCY RECORD**

Callaway Plant, Unit 1

(7/2/2008)

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STAFF ASSESSMENT BY THE OFFICE OF NUCLEAR REACTOR REGULATION

OF UNION ELECTRIC COMPANY'S 3-MONTH RESPONSE

TO GENERIC LETTER 2008-01

CALLAWAY PLANT, UNIT NO. 1

DOCKET NO. 50-483

Background

On January 11, 2008, the Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

Licensee's Proposed Alternative Course of Action

By letter dated April 10, 2008 (ADAMS Accession No. ML081130717), Union Electric Company (the licensee) submitted a 3-month response to GL 2008-01 for Callaway Plant, Unit 1 (Callaway). The licensee stated they cannot meet the requested 9-month schedule for submitting the requested information because walkdowns cannot be completed within the required time because portions of the GL subject systems are inaccessible during power operation for the following reasons: (1) scaffolding needs to be erected; (2) insulation needs to be removed from piping; (3) system operability could be impacted by the walkdown or inspection activities; (4) high radiation areas need to be entered; and (5) prolonged containment entries need to be made.

The licensee indicates that the next refueling outage (Refuel 16) is scheduled to begin on October 11, 2008. Prior to Refuel 16, the licensee will complete the system walkdowns for piping that is outside of the containment building, and perform numerous levelness readings on

Enclosure

uninsulated piping and insulated piping with the insulation in place outside the containment. If insulation removal is required for levelness measurements and removal of the insulation would not cause a system to be inoperable, the levelness measurement will be performed prior to Refuel 16. During Refuel 16, the licensee will complete the system walkdowns for piping that is inside of the containment building, and perform numerous levelness readings on uninsulated piping and insulated piping inside the containment building. For insulated piping outside of the containment building that could not be evaluated due to concerns of system operability during power operation, the levelness measurement of that piping will be also completed during Refuel 16. The licensee's letter dated April 10, 2008, listed the following commitment:

- Submit the Generic Letter 2008-01 requested information to the NRC within 60 days following the end of the Refuel 16 outage that is planned to begin on October 11, 2008.

Based on the current design basis (previous drawing reviews and/or design basis verifications), plant-specific operational experience, and the results of previous system inspections and modifications, the licensee has concluded that the subject systems are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance.

#### NRC Staff Assessment

The NRC staff finds that for Callaway, the licensee's proposed alternative course of action to complete the system walkdowns for piping that is inside of the containment building during the fall 2008 refueling outage is acceptable. This is based on the above-described operating experience and corrective actions associated with managing gas accumulation for the portions of the subject systems that will be accessible during Refuel 16. However, the NRC staff notes that in its 3-month submittal dated April 10, 2008, the licensee committed to provide its initial response for the requested information within 60 days following the end of the Refuel 16 outage that is planned to begin on October 11, 2008, which is more than 11 months after the GL was issued instead of 9 months as specified in the GL. NRC staff requests that the licensee submit a 3-month supplemental response for Callaway to revise its proposed alternative course of action related to its 9-month responses as described below.

The NRC staff requests the licensee to submit a 3-month supplemental response to provide a revised commitment to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the Callaway Refuel 16 outage, provide all GL requested information to the NRC by October 11, 2008.
- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL requested information for the subject systems to the NRC within 90 days following startup from Refuel 16 outage at Callaway.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensee should provide: (1) a

description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's submittal dated April 10, 2008, did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction piping, as well as, whether analysis development is needed to assess gas transport in the subject system piping as a function of system flow. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow-up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.