

September 4, 2008

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Mail Stop P1-137  
Washington, DC 20555-0001

ULNRC-05528



Ladies and Gentlemen:

**REPLY TO NOTICE OF VIOLATION: EA-08-190  
INSPECTION REPORT NO. 50-483/2008003  
CALLAWAY PLANT UNIT 1  
UNION ELECTRIC CO.**

This letter from AmerenUE (Union Electric) transmits our response to Mr. Vincent G. Gaddy's letter dated August 5, 2008, which transmitted a Notice of Violation for events discussed in Inspection Report 50-483/2008003. The response is provided in the attachment to this letter.

This letter contains a new commitment.

If you have any questions regarding this response, or if additional information is required, please contact me at (573) 676-8129.

Sincerely,

A handwritten signature in black ink, appearing to read "Luke H. Graessle".

Luke H. Graessle  
Manager, Regulatory Affairs

CSP/nls

Attachment 1: Response to Violation (EA-08-190)  
Attachment 2: List of Commitments

IEDI  
NRR

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cc: Mr. Elmo E. Collins, Jr.  
Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region IV  
612 East Lamar Drive, Suite 400  
Arlington, TX 76011-4125

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

Mr. Mohan C. Thadani (2 copies)  
Licensing Project Manager, Callaway Plant  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Mail Stop O-8G14  
Washington, DC 20555-2738

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S. L. Gallagher  
L. M. Belsky (NSRB)  
Ms. Diane M. Hooper (WCNOC) w/o  
Mr. Dennis Buschbaum (TXU) w/o  
Mr. Scott Bauer (Palo Verde) w/o  
Mr. Stan Ketelsen (PG&E) w/o  
Mr. Scott Head (STP) w/o  
Mr. John O'Neill (Pillsbury Winthrop Shaw Pittman LLP) w/o  
Missouri Public Service Commission w/o

**Response to Violation (EA-08-190)**

**Statement of Violation**

During an NRC inspection conducted March 24 through June 24, 2008, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires, in part, that "measures shall be established to ensure that, for significant conditions adverse to quality, the cause of the condition is determined and corrective action taken to preclude repetition."

Contrary to this, from December 26, 2006, through May 21, 2008, the licensee failed to take corrective actions to preclude repetition of safety-related emergency core cooling system pipe voiding, and the licensee determined that this condition was a significant condition adverse to quality.

This violation is associated with a Green Significance Determination Process finding.

**Reason For The Violation, Or If Contested, The Basis For Disputing The Violation Or Severity Level**

The Safety Injection System was drained to support maintenance activities during Refuel 15 in spring 2007. Workman's Protection Assurance (WPA) Holdoff H66255 was placed to perform the scheduled work on the system. The work included a job on valve EM8858A, Safety Injection Pump A Suction Pressure Relief to Recycle Hold-Up Tank. This master WPA used procedure OTN-EM-00001, Safety Injection System, to fill and vent the system. The Reactor Operator (RO) who planned this WPA included valve EMV0179, Safety Injection Pump A from Residual Heat Removal (RHR) Heat Exchanger (HX) A Suction Vent, as a vent point since this WPA drained more of the system than assumed in procedure OTN-EM-00001. The scheduled work on EM8858A, Safety Injection Pump A Suction Pressure Relief to Recycle Hold-Up Tank, was not performed during the time H66255 was placed, and was subsequently rescheduled for later in the refuel outage.

WPA H69141 was subsequently generated to support the work on EM8858A. The new WPA referred only to procedure OTN-EM-00001. The WPA writer referred to OTN-EM-00001 and determined that the procedure provided instructions on filling and venting the section of piping that was to be drained for work on EM8858A. This section of piping had to be drained and refilled two (2) additional times to support the work on EM8858A. WPA H69199 and WPA H69228 supporting this work also referred only to OTN-EM-00001 to fill and vent the system.

During spring of 2008, in response to NRC Generic Letter 2008-01 and Wolf Creek Operating Experience, Callaway developed and implemented a plan to verify that the Emergency Core Cooling System (ECCS) is full of water. On May 21, 2008, while implementing this plan, line EM-023-HBC-6", Safety Injection Pump A/B Common Suction Header from RHR 'A' During ECCS Recirculation, at the 1989' elevation, was found to contain a void approximately 6.6 cubic feet in volume. This exceeded the allowable void fraction of 2.105 cubic feet as determined by Nuclear Engineering and documented in Request for Resolution (RFR) 200803669 for this section of piping. At 1430 on May 21, 2008, PEM01A, Safety Injection Pump A, was declared INOPERABLE pursuant to Technical Specification 3.5.2.A. The line was then vented at EMV0179 and declared OPERABLE at 2050 on May 21, 2008.

The investigation into why the void was present determined that the fill and vent section of OTN-EM-00001 did not utilize valve EMV0179 as a vent point. This vent is needed to vent the section of piping between the "A" SI Pump suction and EMHV8807B, RHR HX A to SI Pumps Suction Downstream Isolation Valve B (Line EM-023-HCB-6").

The issue of voiding in systems at Callaway was previously addressed in a February 2005 Significance Level 2 CAR 200501092, Potential Adverse Trend - Recurrence of Voiding in Safety-Related Systems. The adverse trend was evaluated and determined to be caused by inadequate fill and vent instructions. At that time, the normal operating procedures did not contain fill and vent instructions. The Corrective Action to Prevent Recurrence (CATPR) for this adverse trend was to add fill and vent sections to the appropriate ECCS normal system operating procedures. This CATPR, if correctly implemented, would have prevented this event. However, the revision (Rev 022) that was made to OTN-EM-00001 in the Fall 2005 timeframe did not include EMV0179 as a vent point due to inadequate self checking during procedure revision process. Neither the procedure writer nor the procedure reviewers identified the need to vent from EMV0179.

#### Root Cause Process

The Root Cause Analysis Team for the CAR that addressed the void condition discovered on May 21, 2008, developed the following causal factor and root cause:

##### Causal Factor

Procedure OTN-EM-00001, Safety Injection System, Rev 22 did not include EMV0179 as a vent location for suction line EM-023-HCB-6". Subsequent revisions up to Revision 27 have not included EMV0179 as a vent location. The inadequate procedure is considered to be a flawed defense.

#### Root Cause

The procedure writer and reviewers did not identify that EMV0179 needed to be included in OTN-EM-00001 as a vent point due to inadequate self checking during procedure revision process.

There were no latent organizational weaknesses identified with either the Causal Factor or the Root Cause.

#### **Corrective Steps Taken and Results Achieved**

- Line EM-023-HCB-6" was vented at EMV0179 on May 21, 2008, and verified to be full of water (no unacceptable voids).
- All ECCS fill and vent sections of the procedures were reviewed. The evaluation determined that all the other ECCS fill and vent instructions were adequate to ensure that the piping was full of water.
- The individuals that revised and reviewed OTN-EM-00001 have been coached on the need to self-check their work and ensuring the adequacy of the procedure reviews.

#### **Corrective Steps Taken to Avoid Further Violations**

- OTN-EM-00001 has been revised to include EMV0179 as a vent point in the Fill and Vent section of the procedure.
- OSP-SA-00003, Emergency Core Cooling System Flow Path Verification and Venting, has been revised to include EMV0175, RHR HX A to SI Pump A Vent, EMV0179, SI Pump A from RHR HX A Suction Vent, and EMV0199, SI Pumps Suction Cross Connect Header Vent, as vent locations. This surveillance procedure is used to verify that the ECCS is full of water on a monthly basis.
- APA-ZZ-00101, Processing Procedures, Manuals, and Desktop Instructions, was revised in November 2007 (Revision 045) to require at least two (2) Technical Reviews. This change in the procedure review and approval process will help minimize the possibility of one Technical Review making an error as occurred in Revision 22 of procedure OTN-EM-00001.
- Callaway personnel are currently conducting an additional detailed review of the fill and vent procedures that were previously evaluated or revised as corrective action for the previous corrective action document, CAR 200501092. There were ten systems reviewed as part of that corrective action. The systems are as follows:

Auxiliary Feedwater	Chemical and Volume Control
Borated Water Storage	Service Water
Essential Service Water	Component Cooling Water
Residual Heat Removal	Safety Injection
Containment Spray	Accumulator Safety Injection

**Date when Full Compliance will be Achieved**

Callaway will be in full compliance after completion of any procedure revisions that may be necessitated by the ongoing review of procedures for the ten systems identified above. The procedure revisions will be completed by October 15, 2008.

### LIST OF COMMITMENTS

The following table identifies those actions committed to by AmerenUE in this document. Any other statements in this document are provided for information purposes and are not considered commitments. Please direct questions regarding these commitments to: Tom Elwood, Supervising Engineer, Regulatory Affairs and Licensing at 573-676-6479.

<b>COMMITMENT</b>	<b>Due Date/Event</b>
Callaway will complete procedure revisions that may be necessitated by the ongoing review of procedures for the ten systems identified in ULNRC05528. The procedure revisions, if necessary, will be completed by October 15, 2008.	October 15, 2008