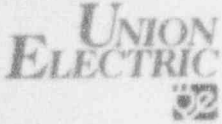


Callaway Plant
Post Office Box 620
Fulton, Missouri 65251
314-676-8245



May 21, 1993

Garry L. Randolph
Vice President,
Nuclear Operations

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

ULNRC -2803

Gentlemen:

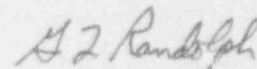
**REPLY TO NOTICE OF VIOLATION
INSPECTION REPORT NO. 50-483/93003
CALLAWAY PLANT**

This responds to Mr. L. Robert Greger's letter dated April 27, 1993, which transmitted a Notice of Violation for events discussed in Inspection Report 50-483/93003. Our response to the violation is presented in the attachment.

None of the material in the response is considered proprietary by Union Electric Company.

If you have any questions regarding this response, or if additional information is required, please let me know.

Very truly yours,

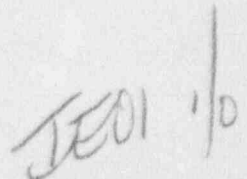

G. L. Randolph

GLR/tmw

Attachment: 1) Response to Violation

cc: A. B. Davis - Regional Administrator, USNRC Region III
I. N. Jackiw - Chief, Reactor Projects Section 3C, USNRC Region III
L. R. Wharton - USNRC Licensing Project Manager (2 copies)
USNRC Document Control Desk (Original)
Manager - Electric Department, Missouri Public Service Commission
B. L. Bartlett - USNRC Senior Resident Inspector
Shaw, Pittman, Potts, and Trowbridge

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PDR ADOCK 05000483
G PDR



Statement of Violation

During an NRC inspection conducted from February 1 through April 8, 1993, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, the violation is listed below:

10 CFR 50, Appendix B, Criterion XVI, Corrective Action, states, in part, that for significant conditions adverse to quality, corrective actions shall be taken to preclude repetition.

Contrary to the above, corrective actions to prevent additional water hammer events during routine operational evolutions for the essential service water (ESW) system were inadequate, in that on March 23, 1993, a water hammer occurred when the "A" ESW pump was restarted during the conduct of routine surveillance procedure OSP-EF-P001A.

This is a Severity Level IV violation (Supplement I).

Reason for the Violation

Corrective action for a previous water hammer event included adding a caution statement in the normal operating procedure for the essential service water system. This caution statement directed personnel to isolate the containment coolers if flow was stopped through the containment cooler and the return was not aligned to flow over the cooling tower fill. However, the wording of the caution was not specific in requiring both inlet and outlet valves to be closed.

Operations personnel performing a series of surveillance tests on the ESW system did not fully understand the effects of securing flow through the system. The operators thought that closing the containment cooler return isolation valves would prevent draining of the coolers as well as any water hammer when flow was restored. They failed to realize that the containment coolers could also drain back through the inlet valves.

Corrective Steps that have been taken and results achieved:

Operations has issued a Night Order to warn personnel of the potential effects of interrupting flow in the ESW train and the causes of water hammer. Caution tags have been placed on the ESW pump controls to heighten operator awareness of the potential for water hammer events if flow is interrupted in the ESW system. The caution in the normal operating procedure has been revised to clearly specify the need to isolate both the supply and return valves for the containment coolers prior to restoring ESW flow after it has been interrupted. The caution tags and night order are short term actions. The caution tags will be removed from the ESW pump controls when procedures and training are complete.

Corrective steps that will be taken to avoid further violations:

Specific training on this event and the mechanisms that can lead to potential water hammer events will be covered in requalification training for licensed operators during June and July. The normal operating procedure for the ESW system has been revised to incorporate the more specific caution statement guidance as well as a specific section for a controlled restoration of flow should it be interrupted during normal operations. Other procedures which could potentially interrupt flow have been reviewed and caution statements will be added to those procedures to refer personnel to the normal operating procedure whenever flow is interrupted.

Date when full compliance will be achieved:

The requalification cycle training and procedure revisions will be complete by August 1, 1993.