



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064**

March 6, 2001

EA-01-036

Garry L. Randolph, Senior Vice
President and Chief Nuclear Officer
Union Electric Company
P.O. Box 620
Fulton, Missouri 65251

**SUBJECT: CALLAWAY PLANT - FIRE PROTECTION TRIENNIAL BASELINE INSPECTION
REPORT NO. 50-483/00-13 ACKNOWLEDGEMENT**

Dear Mr. Randolph:

Thank you for your letter of December 1, 2000, in response to our October 30, 2000, letter transmitting NRC Inspection Report 50-483/00-13. This inspection report discussed two Non-Cited Violations.

Your response indicated that you are denying one Non-Cited Violation. This Non-Cited Violation contained three examples of changes made to your NRC-approved protection program that adversely affected your ability to achieve and maintain safe shutdown in the event of a fire in Fire Areas A-1A, A-18, and A-27. Specifically, you performed engineering evaluations of existing configurations in these fire areas, in which you concluded that the installed intervening combustibles and fire hazards in the 20-foot horizontal separation zones between redundant systems necessary for achieving and maintaining safe shutdown were acceptable. These configurations do not meet the separation criteria of Section C.5.b of Branch Technical Position Chemical Engineering Branch 9.5-1, to which you are licensed.

Your denial is based on docketed and non-docketed interactions between Union Electric Company and NRC staff on fire protection issues, which you assert demonstrate that NRC was aware of the intervening combustibles and fire hazards at issue in this violation, and approved the configurations as installed. You further stated that your evaluations of existing configurations in these fire areas, addressed transient combustible control, not the existing plant design; therefore, your evaluations do not constitute changes to the plant. We reviewed the docketed correspondence you cited in your letter, and on the basis of this review, we found no information to indicate that the NRC was aware of and approved the existing configurations in Fire Areas A-1A, A-18, and A-27. Accordingly, we have concluded that you did not provide any additional information that would justify our withdrawing the violation. Therefore, the violation, as documented in NRC Inspection Report 50-483/00-13, is sustained. It is our understanding that your posted compensatory measures for Fire Areas A-1, A-18, and A-27 will remain in place until the corrective actions for this violation are completed. The enclosure to this letter provides a more detailed discussion of our position.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Arthur T. Howell III, Director
Division of Reactor Safety

Docket No.: 50-483
License No.: NPF-30

Enclosure: as stated

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ENCLOSURE

License Condition 2.C(5)(d) of the Callaway Plant Operating License states, "The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire." In Inspection Report 50-483/0013, dated October 30, 2000, the NRC documented two Non-Cited Violations, one of which involved three examples of changes made to your NRC-approved fire protection program that adversely affected your ability to achieve and maintain safe shutdown in the event of a fire in Fire Areas A-1A, A-18, and A-27 (Non-Cited Violation 50-483/0013-01). In this Non-Cited Violation, the NRC found that you performed engineering evaluations of existing configurations in these fire areas, in which you concluded that the installed intervening combustibles and fire hazards in the 20-foot horizontal separation zones between redundant systems necessary for achieving and maintaining safe shutdown were acceptable. These configurations did not meet the separation criteria of Section C.5.b of Branch Technical Position (BTP) Chemical Engineering Branch (CMEB) 9.5-1, to which the Callaway Plant was licensed. Therefore, in performing engineering evaluations to accept these non-conforming configurations, the NRC concluded that you made changes to the NRC-approved fire protection program that adversely affected your ability to achieve and maintain safe shutdown. This is a violation of License Condition 2.C(5)(d) with three examples.

The attachment to your letter of November 30, 2000, documented your basis for denying the Non-Cited Violation (50-483/0013-01). The positions you presented in that attachment and our evaluations of those positions are addressed below:

Licensee Position: In the attachment to your letter of November 30, 2000, you stated that the engineering evaluations performed in 1989 and 1996 were limited to enhancing transient combustible controls within Fire Areas A-1A, A-18, and A-27, and did not address the original design of the plant.

NRC Position: Contrary to your contention that these engineering evaluations were limited to enhancing transient combustible control, we found several statements concerning intervening combustibles and/or fire hazards within 20-foot separation zones. The Summary Description in the 1989 Suggestion-Occurrence-Solution SOS 89-11 reads, "THE SEPARATION OF CABLES & EQUIP & ASSOC NON-SAFETY CIRCUITS OF REDUND TRNS BY HORIZ DIST OF 20' W/NO INTERVENING FIRE HAZARDS MAY NOT EXIST IN SOME RMS." This appears to indicate that existing configurations may not meet the separation criteria of Section C.5.b of BTP CMEB 9.5-1, to which the Callaway Plant was licensed. Furthermore, the attachment to the 1996 evaluation (RFR 16916 A) stated that (1) the 20-foot separation zone in Fire Area A-18 contained intervening combustibles and was part of the original Fire Hazards Analysis; (2) that Fire Area A-1A had intervening combustibles, detection, and partial suppression; and (3) the 20-foot separation zone in Fire Area A-18 was similar to Fire Area A-27 with respect to suppression, detection, and intervening combustibles.

Licensee Position: In the attachment to your letter of November 30, 2000, you stated, "The cable tray configuration and fire protection features were actually a part of the original design of the plant and, therefore, do not constitute changes to the plant."

NRC Position: License Condition C(5)(d) of the Callaway Plant, Unit 1, Facility Operating License NFP-30, Amendment 120 states, "The licensee may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire."

Although you did not make physical changes to the plant, it is our position that in performing engineering evaluations in which you concluded that the installed configurations in Fire Areas A-1A, A-18, and A-27 were acceptable, you made changes to your approved fire protection program. As indicated above, these configurations did not meet the separation criteria of Section C.5.b of Branch Technical Position Chemical Engineering Branch 9.5-1, to which the Callaway Plant was licensed. In these evaluations, you failed to identify that redundant safe shutdown cables could be vulnerable to fire damage due to the existence of intervening combustibles and fire hazards contained in the 20-foot separation zones. Therefore, it is our position that without prior Commission approval, you made changes to your approved fire protection program that affected your ability to achieve and maintain safe shutdown.

Licensee Position: In the attachment to your letter of November 30, 2000, you stated that the separation zones were identified in the Electrical Fire Hazards Analysis Program (EFHAP) and that the EFHAP was discussed in the Fire Hazards Review Methodology section of the Final Safety Analysis Report (FSAR) Fire Hazards Analysis. You indicated that the FSAR Fire Hazards Analysis was submitted to the NRC prior to issuing the Callaway Plant an operating license, thereby, implying the NRC was cognizant of the installed configurations in Fire Areas A-1A, A-18, and A-27.

NRC Position: The EFHAP specified that electrical cables and components were not considered intervening combustibles with regard to Appendix R, as long as the area in question had suppression and detection or a designed fire stop within the intervening combustible. However, the EFHAP itself was not submitted to the NRC. We reviewed the FSAR Fire Hazards Analysis, which was submitted to the NRC during licensing, and found no discussion of cables and fire hazards within the 20-foot separation zones. You provided no information that would indicate that the existing configurations were reviewed and approved by the NRC.

Licensee Position: In the attachment to your letter of November 30, 2000, you stated that during plant licensing, an NRC trip report dated December 21, 1983, identified that the configuration of the component cooling water pump area was not in conformance with Section C.5.b of BTP CMEB 9.5-1. Your response notes that the trip report states that the Callaway Plant should either extend the sprinkler system into this area or provide cable tray fire stops to prevent the spread of flames along the cable trays. You chose to add fire stops and submitted this change in a letter to the NRC dated February 1, 1984, to which the NRC responded with approval of the configuration in Supplement 3 of the Safety Evaluation Report (SER). From this you concluded, "It is clear from this documentation that the NRC accepted full suppression in areas with intervening cables between redundant trains of safe shutdown equipment. The three areas addressed by this violation have full suppression and therefore were not identified as a concern by the NRC during pre-licensing review walk-downs."

NRC position: In the SER, the NRC acknowledged your commitment to installing fire stops in the intervening cable trays in the component cooling water area, stating, "Because of the nature and configuration of the combustibles in this area, the fire stops would effectively prevent a fire from spreading to redundant trains. On the basis of this commitment, the staff finds that the protection provided for the component cooling water pumps meets the guidelines in Section C.5.b of BTP CMEB 9.5-1, and is, therefore, acceptable." It is our position that this discussion in the SER is limited to the component cooling water area (Fire Area A-16), and that the staff's conclusion is based on the unique configuration of this fire area. We can find no evidence in either the SER or your February 1, 1984, letter to us that this approval extends to other fire areas. Nor can we find evidence that the NRC knew of and approved the nonconforming configurations in Fire Areas A-1A, A-18, and A-27, which are the subject of this Non-Cited Violation.

Licensee Position: In the attachment to your letter of November 30, 2000, you stated that your submittal to the NRC dated February 1, 1984, indicated that all cables in the auxiliary building are qualified to Institute of Electronic and Electrical Engineers (IEEE)-383 and are not susceptible to burning from electrically generated fires, and will not propagate fire if exposed to a transient fire when sprays are actuated. The subsequent SER, Supplement 3, did not document any disagreement with this statement, therefore, you concluded that your licensing basis is that IEEE-383 cables in the presence of full suppression do not constitute a credible configuration that allows fire to propagate through a 20-foot separation area.

NRC position: The February 1, 1984, submittal did not identify that these IEEE-383 cables were traversing the 20-foot separation zones, thus, could be considered intervening combustibles. There is no documentation which indicates that the NRC knew that IEEE-383 cables in Fire Area A-1A, A-18, and A-27 were located in the 20-foot separation zones. Also, we note that BTP CMEB 9.5-1, Section C.5.e.(3), states, "Electrical cable construction should, as a minimum, pass the flame test in the current IEEE Std 383. (This does not imply that cables passing this test will not require fire protection.)"

Licensee Position: In the attachment to your letter of November 30, 2000, you stated that in the June 22, 1984, NRC Inspection Report, the NRC documented acceptance of the configuration in Fire Area A-1 based on a combination of separation and suppression.

NRC Position: NRC Inspection Report 50-483/84-15, dated June 22, 1984, discussed the corridor in the 1974 foot elevation of the auxiliary building (Fire Area A-1), stating that "complete area wide fire detection and automatic fire suppression is not provided in the fire area. The existing installation has, however, been accepted by NRR." The NRC, in Supplement 3 of the SER, dated May 1984, stated that the sprinkler system will meet the guidelines in Section C.6.c of BTP CMEB 9.5-1, based on the licensee's commitment to lower obstructed sprinklers. It is our position that both the Inspection Report and Supplement 3 of the SER addressed compliance with Section C.6.c of BTP CMEB 9.5-1 concerning design and placement of the sprinkler system. We can find no evidence that you identified to the NRC or that the NRC approved of cables traversing the 20-foot separation zones, a configuration which does not meet Section C.5.b of BTP CMEB 9.5-1. Furthermore, statements in an inspection report are not part of the licensing basis.