

November 30, 2000

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

ULNRC-4347

Gentlemen:



**REPLY TO NON-CITED VIOLATION  
INSPECTION REPORT NO. 50-483/2000-013  
CALLAWAY PLANT  
UNION ELECTRIC CO.**

This responds to Jeffrey L. Shackelford's letter dated October 30, 2000, which transmitted Inspection Report 50-483/2000-013 and included two Non-Cited Violations. Our response is in regards to the Non-Cited Violation referring to cabling within a 20-foot separation zone (50-483/0013-01)

Union Electric does not agree that a violation of the NRC approved fire protection program exists, and therefore denies the violation. The plant configurations in question constitute the original plant design as approved by the NRC. The original installed configuration continues to assure that one train of safe shutdown equipment remains free from fire damage, thereby ensuring the ability to achieve and maintain safe shutdown in the event of a fire. Our detailed response is attached.

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

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

Very truly yours,

A handwritten signature in dark ink, appearing to read "Joseph V. Laux", written in a cursive style.

Joseph V. Laux  
Manager, Quality Assurance

JVL/slk

Attachment: 1) Response to Non-Cited Violation

IEOI

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NRC Inspection Report 50-483/ 2000-013 documented the Fire Protection Triennial Baseline Inspection of Callaway Plant. The inspection report documented the following 'Green' finding identified by tracking number 50-483/0013-01:

"In Fire Area A-27 (reactor trip switchgear room) the team found that redundant equipment required for safe shutdown of the plant following a fire was not separated in accordance with Section C.5.b of Branch Technical Position Chemical Engineering Branch 9.5-1, in that the 20 feet of horizontal space between redundant trains of safe shutdown equipment contained intervening combustibles. Subsequent to this finding, the licensee identified similar conditions in Fire Areas A-1 A (west corridor of the 1974 foot elevation of the auxiliary building), and Fire Area A-18 (north electrical penetration room in the auxiliary building). The team also found that in 1989, and 1996, the licensee performed engineering evaluations to justify installed configurations in several fire areas, including Fire Areas A-1 A, A-18, and A-27, which did not meet the separation criteria of Section C.5.b of Branch Technical Position Chemical Engineering Branch 9.5-1. In performing these evaluations, however, the licensee failed to consider, as intervening combustibles or fire hazards, non-safety-related cables and other equipment located in the 20-foot separation areas between redundant trains of equipment necessary to achieve and maintain safe shutdown conditions. Therefore, the licensee did not identify the safe shutdown equipment which could be vulnerable to fire damage and the operator actions to restore that equipment to service. The failure to identify and evaluate these additional operator actions were considered by the team to have an adverse effect on the licensee's ability to achieve and maintain safe shutdown in the event of a fire. Therefore, the team concluded that without prior approval of the Commission, the licensee made changes to their approved fire protection program that adversely affected their ability to achieve and maintain safe shutdown in the event of a fire in Fire Areas A-1A, A-18, and A-27. This is a violation of Operating License Condition 2.C(5)(d), with three examples, and is being treated as a Non-Cited Violation consistent with Section VI.A of the NRC Enforcement Policy. The licensee entered this finding into their corrective action program as Suggestion-Occurrence-Solution 00-2070 and posted compensatory measures in accordance with the provision of their fire protection program (Section 1R05.4).

Each example of this violation was evaluated using the significance determination process, which indicated that, for each of the fire areas involved, the violation had very low safety significance, because the ignition frequencies were relatively low, fire detection and suppression systems were not degraded, and operator actions were available to ensure a safe shutdown path for a fire in each of the fire areas."

Union Electric disagrees with finding 50-483/0013-01 as documented in the report. Specifically, the report states that Callaway justified the configurations for the 20-foot separation zones in engineering evaluations performed in 1989 and 1996. However, the evaluations performed in 1989 and 1996 addressed transient combustible control within those areas, not the existing plant design. 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. The separation zones were identified in the Electrical Fire Hazards Analysis Program (EFHAP). The EFHAP was discussed in the Fire Hazards Review Methodology contained in the FSAR Fire Hazards Analysis which was submitted to the NRC prior to issuing Callaway an operating license.

Callaway's licensing basis for intervening combustibles in the subject 20-foot separation zones is based on the following:

1. During plant licensing, the NRC Chemical Engineering Branch performed a Fire Protection Site Audit which identified a concern with a 20-foot separation zone as documented in a December 21, 1983 Trip Report. The Trip Report indicated the configuration of the component cooling water pump area was not in conformance with Section C.5.b of Branch Technical Position Chemical Engineering Branch 9.5-1. The report stated that Callaway "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." Callaway chose to add fire stops and submitted this change in a letter to the NRC (SLNRC 84-014, Enclosure page 4-1) dated February 1, 1984. The NRC responded with approval of the design in the SER, Supplement 3. 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.
2. The same submittal (SLNRC 84-014, Enclosure, page 5-2) to the NRC indicated "All cables routed in the auxiliary building are qualified to IEEE-383 and are not susceptible to burning from electrically generated fires. Nor are they expected to propagate fire if exposed to a transient fire when sprays are actuated." The NRC did not document any disagreement with this submittal. Therefore, Callaway's 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.
3. The NRC specifically documented acceptance of the configuration in Fire Area A-1 based on a combination of separation and suppression (NRC Inspection Report dated June 22, 1984).

The evaluations performed in 1989 and 1996 were limited to enhancing transient combustible controls in the 20-foot separation zones and did not change the design of the plant. The evaluations calculated that a large quantity of transient combustibles was necessary to reach the ignition temperature of IEEE-383 intervening cables, further supporting the adequacy of the existing plant design. The evaluations developed design

drawings to show the locations of the separation zones and then had the floors physically marked so personnel could identify the separation areas within the plant. The areas were marked as 'No Combustible Zones' to prevent the placement of transient combustibles in the areas. The 1996 engineering evaluation clarified the 20-foot Separation Zone within Fire Area A-18 in the FSAR Fire Hazards Analysis. Originally, the 20-foot separation zone in A-18 was not clearly documented in the FSAR. However, the separation zone was discussed in the EFHAP. The EFHAP as stated above was contained in a general reference in the FSAR introduction section on methodology. The 20-foot separation zone in Fire Area A-18 was also a part of the original plant design. Therefore, the 1989 and 1996 evaluations did not adversely affect Callaway's ability to achieve and maintain safe shutdown in the event of a fire.

As a result of this review, Union Electric will enhance the FSAR Fire Hazards Analysis discussion of the 20-foot separation zones for Fire Areas A-1, A-18, and A-27 with regard to the intervening cables. We will also enhance the Union Electric response to 10 CFR 50 Appendix R documented in FSAR SP Appendix 9.5E by providing more detail regarding the design of the separation zones.

Callaway's design assures that one train of safe shutdown equipment remains free from fire damage, thereby ensuring the ability to achieve and maintain safe shutdown in the event of a fire. Callaway's licensing basis for intervening combustibles in 20-foot separation zones was not changed. The 1989 and 1996 engineering evaluations did not make a change to the Fire Protection Program that adversely affected our ability to achieve and maintain safe shutdown in the event of a fire.