

September 24, 2004

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

Ladies and Gentlemen:

ULNRC-05061



**CALLAWAY PLANT
UNION ELECTRIC CO.
DOCKET NUMBER 50-483
WITHDRAWAL OF INITIAL DEFENSE-IN-DEPTH AND DIVERSITY
ASSESSMENT FOR DIGITAL UPGRADE OF
CALLAWAY'S INSTRUMENTATION AND CONTROL SYSTEMS**

By letter dated March 4, 2004 AmerenUE (Union Electric Company) submitted a defense-in-depth and diversity (D3) assessment for the Framatome Advanced Nuclear Power (FANP) TELEPERM XS (TXS) systems to be installed at the Callaway Plant. In that letter (AmerenUE Letter ULNRC-04945), AmerenUE noted that it was working in conjunction with Wolf Creek Nuclear Operation Corporation (WCNOC) to develop modification plans for replacing current analog-based instrumentation and control systems, including the reactor trip system (RTS) and engineered safety features actuation system (ESFAS) with the digital-based FANP TXS system, for Callaway and Wolf Creek. AmerenUE indicated that it was submitting the D3 assessment for NRC approval because the assessment was intended to support anticipated license amendment requests for the planned system replacements. NRC review and approval of the assessment was requested by December 1, 2004.

The D3 assessment (that was attached to the March 4, 2004 letter) addressed the TXS design generically described in Topical Report EMF-2110(NP), Revision 1, "TELEPERM XS: A Digital Reactor Protection System," for which the NRC documented its acceptance by letter dated May 5, 2000. The D3 assessment was based on this design but also, in part, on the results of a meeting conducted between AmerenUE, WCNOC, FANP and NRC personnel on November 12, 2003, wherein the defense-in-depth and diversity aspects of the TXS design were discussed, including the potential design to minimize the probability of a software common mode failure. The assessment described the design techniques applied to the TXS design and explained how the application of defense-in-depth and diversity concepts to the both the software and hardware design result in the capability to minimize or tolerate common-mode failures without defeating safety functions.

A001 Rec'd at DCD
10/2/04

Pursuant to the NRC's guidance in NUREG 0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," Branch Technical Position (BTP) HICB-19, "Guidance for Evaluation of Defense-in-Depth and Diversity in Digital Computer-Based Instrumentation and Control Systems," the D3 assessment included a re-evaluation of the accidents, transients and other events postulated and analyzed in the UFSAR, in order to assess the postulated plant response to these events with the TXS system installed. Due to the TXS system's diversity, however, as enhanced by the proposed design, it was concluded in the assessment that a postulated software common-mode failure would be limited to the extent that credited, automatic RTS and/or ESFAS functions would remain sufficiently available to adequately mitigate all postulated events consistent with the current licensing basis.

Subsequent to submittal of the D3 assessment, however, the NRC staff provided significant comments on the TXS design and D3 assessment in the form of a preliminary position paper. The comments were discussed in a second meeting conducted between AmerenUE, WCNOG, FANP and NRC staff on April 15, 2004.

Based in part on the discussion from the April 15, 2004 meeting, AmerenUE and WCNOG have each determined that the D3 assessment should be revised and that the submitted D3 report should be withdrawn. In addition, the implementation schedule for the TXS modifications at each plant has since been re-evaluated, resulting in postponement of the modifications at each plant. A new assessment(s) will thus be prepared and submitted at a later time. On this basis, AmerenUE requests withdrawal of the D3 assessment that was provided in the March 4, 2004 submittal, such that NRC review and approval of that assessment is no longer required. Please contact me at (573) 676-8659 or Dave Shafer at (314) 554-3104 for any questions you may have concerning this request.

Very truly yours,



Keith D. Young
Manager, Regulatory Affairs

KDY/TBE

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