WOLF CREEK
NUCLEAR OPERATING CORPORATION

Matthew W. Sunseri
Vice President Oversight

October 13, 2004
WM 04-0042

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

Reference: Letter WO 04-0002 dated March 3, 2004, from B. T. McKinney, WCNOC, to USNRC

Subject: Docket Number 50-482: Withdrawal of Defense-In-Depth and Diversity Assessment for Digital Upgrade of Wolf Creek Generating Station's Instrumentation and Control Systems

Gentlemen:

By the Reference, Wolf Creek Nuclear Operating Corporation (WCNOC) submitted a defense-in-depth and diversity assessment for the Framatome Advanced Nuclear Power (FANP) Teleperm XS (TXS) systems to be installed at the Wolf Creek Generating Station (WCGS). In the Reference, WCNOC noted that it was working in conjunction with AmerenUE 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 WCGS and the Callaway Plant. WCNOC indicated that it was submitting the defense-in-depth and diversity assessment for NRC approval in conjunction with AmerenUE and that the assessment was intended to support future license amendment requests (LARs) that would be submitted by WCNOC (for WCGS) and AmerenUE (for Callaway). NRC review and approval of the assessment was requested by December 1, 2004.

The defense-in-depth and diversity assessment (that was attached to the Reference) addressed the TXS design generically described in Topical Report EMF-2110(NP), Revision 1, "TELEPERM XS: A Digital Reactor Protection System," and for which the NRC documented its acceptance by letter dated May 5, 2000. The defense-in-depth and diversity assessment was based on this design and 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 utilization of diverse processors 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 both the software and hardware design result in the capability to minimize or tolerate common-mode failures without defeating safety functions.

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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 defense-in-depth and diversity assessment included a re-evaluation of the accidents, transients and other events postulated and analyzed in the Updated Safety Analysis Report (USAR) to assess the postulated plant response to these events with the TXS system installed. The assessment concluded that a postulated software common-mode failure would be limited to the extent that credited, automatic RTS and/or ESFAS functions would remain available to adequately mitigate all postulated events consistent with the current licensing basis.

Subsequent to submittal of the defense-in-depth and diversity assessment, the NRC staff provided significant comments on the TXS design and defense-in-depth and diversity assessment in the form of a preliminary position paper. The comments were discussed in a second meeting between AmerenUE, WCNOC, FANP and NRC staff on April 15, 2004.

Based in part on the discussion from the April 15, 2004 meeting, WCNOC and AmerenUE have each determined that the defense-in-depth and diversity assessment 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. On this basis, WCNOC requests withdrawal of the defense-in-depth and diversity assessment that was provided in the Reference, such that NRC review and approval of that assessment is no longer required. Please contact me at (620) 364-4008, or Mr. Kevin Moles at (620) 364-4126 for any questions you may have regarding this submittal.

Very truly yours,

Matthew W. Sunseri
Vice President Oversight

MWS/rlg

cc: V. L. Cooper (KDHE)
J. N. Donohew (NRC)
D. N. Graves (NRC)
B. S. Mallett (NRC)
Senior Resident Inspector (NRC)