



KANSAS GAS AND ELECTRIC COMPANY

GLENN L KOESTER  
VICE PRESIDENT - NUCLEAR

February 5, 1985

Mr. R.P. Denise, Director  
Wolf Creek Task Force  
U.S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76011

KMLNRC 85-047  
Re: Docket No. STN 50-482  
Subj: Final 10CFR50.55(e) Report - Load Shedding  
and Emergency Load Sequencer (53564-K160)

Dear Mr. Denise:

This letter provides the final report submitted pursuant to 10CFR50.55(e) concerning wiring errors in the Load Shedding and Emergency Load Sequencer (LSELS) at Wolf Creek Generating Station. This matter was initially reported by Otto Maynard of Kansas Gas and Electric Company (KG&E) to William Guldmond and Lawrence Martin of the Nuclear Regulatory Commission on January 19, 1985.

During preoperational testing of the LOCA Load Sequencer (SU3-NF02) a test was performed to demonstrate independence between redundant on-site AC power distribution systems in accordance with Regulatory Guide 1.41. To perform this test, one on-site AC power distribution system was completely shutdown; i.e. de-energize all circuits within the one on-site AC power distribution system including all DC and control power supplies. After the system was aligned in accordance with the above description, the other on-site distribution system was tested to demonstrate operability. During this test, the Essential Service Water Pump (ESWP) for the train being tested would not start.

An investigation which included an operability test was performed to identify the extent of the problem. The failure was identified as an internal wiring problem with the LSELS which prevented the ESWP and the Auxiliary Feedwater Pump from starting. This condition was determined to be common to both redundant load groups. During the investigation another extraneous jumper was found which compromised the sequencing coordination between Safety Injection and Containment Spray Pumps.

Consolidated Controls Corporation (CCC) supplier of the LSELS, determined that the wiring error resulted from drawing and

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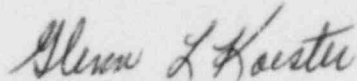
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field implementation errors by CCC personnel. When CCC personnel visited Wolf Creek the week of September 12, 1983 to correct channel separation deficiencies, the upgrade of the equipment in accordance with CCC Drawing KN1909, Sheet 10 was requested and implemented. This drawing had undergone several revisions subsequent to successful testing and shipment of the equipment to Wolf Creek in January 1980. This drawing contained errors whereby the vendor made wiring connections to output relays, which in turn caused the premature load shed actuation of the ESWP and the Auxiliary Feedwater Pumps. As a further consequence subject breakers could not be sequenced automatically or closed manually due to the load shed sequencer contact remaining closed. At the time of these wiring changes, power to the LSELS equipment was not available, and testing to verify the adequacy of the changes could not be accomplished.

Corrections to the wiring of the Logic Rack 7N173 were made at Wolf Creek under the supervision of on-site CCC personnel the weekend of January 19 & 20, 1985 and subsequent system testing verified correct operation of the LSELS equipment. In addition CCC will revise their drawings to correct the discrepancies.

Please contact me or Mr. Otto Maynard of my staff if you have any questions concerning this subject.

Yours very truly,



Glenn L. Koester  
Vice President - Nuclear

GLK:sjm

cc PO'Connor (2)  
HBundy  
WGuldemond