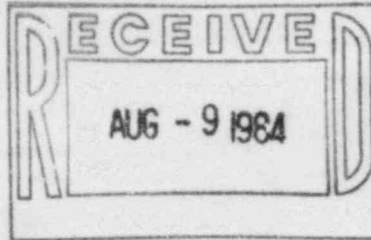




KANSAS GAS AND ELECTRIC COMPANY

GLENN L. KOESTER  
VICE PRESIDENT - NUCLEAR



August 6, 1984

Mr. D.R. Hunter, Chief  
Reactor Project Branch 2  
J.S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76011

KMLNRC 84-132

Re: Docket No. STN 50-482

Ref: Interim Report KMLNRC 84-014 dated 2/9/84  
from GLKoester, KG&E, to JEGagliardo, NRC

Subj: Final 10CFR50.55(e) Report - Butterfly Valves

Dear Mr. Hunter:

This letter provides the final report submitted pursuant to 10CFR50.55(e) concerning Butterfly Valves. This matter was reported by Mr. Otto Maynard of Kansas Gas and Electric Company (KG&E) to Mr. William Johnson of the Nuclear Regulatory Commission, Region IV, on January 10, 1984.

Please direct any questions concerning this subject to me or to Mr. Otto Maynard of my staff.

Yours very truly,

*Glenn L. Koester*

GLK:bb

Attach

xc: RCDeYoung, w/a

PO'Connor, w/a

HBundy, w/a

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FINAL REPORT  
On  
BUTTERFLY VALVES  
at  
WOLF CREEK GENERATING STATION

KANSAS GAS & ELECTRIC COMPANY

July 11, 1984

## INDEX

- I. Introduction
- II. Description of Problem
- III. Analysis of Safety Implications
- IV. Corrective Actions

## I. INTRODUCTION

During flushing operations K&GE Startup personnel experienced difficulty in operating a twenty-inch butterfly valve located in the component cooling water (EG) system. The valve (heat exchanger outlet valve EG-VO44) was subsequently disassembled and the internals were examined to determine the cause of the operating difficulties. The examination revealed that the two taper pins which secure the butterfly valve disc to the shaft were missing. At that time KG&E reported the deficiency pursuant to 10CFR50.55(e) and initiated corrective actions.

## II. DESCRIPTION OF PROBLEM

The valve in question was a twenty-inch butterfly valve, Type 9270, supplied by Fischer Control. The disc in this type of valve is secured to the shaft by two taper pins. Two pin holes through the valve disc match two pin holes along the major axis of the valve shaft. The pins are inserted and then seated by tapping to a snug fit. The four inch long pins, Fischer Part #H1374535362, have an outside diameter of .591 inches at the large end and tapers at a rate of .25 inches per foot.

As a result of finding the missing pins in the heat exchanger outlet valve, all other valves of the same type were disassembled and examined. The inspections identified five additional valves with missing or improperly seated pins.



### III. ANALYSIS OF SAFETY IMPLICATIONS

The valves found with missing or improperly seated pins were all safety-related and the inoperability of any of these valves could degrade the operability of the safety-related system in which they are installed. Although the failure of a single valve or certain combinations of valves will not preclude the safe operation/shutdown of the plant, valve failure could render their respective systems inoperable. In lieu of performing an evaluation of the safety implications for each valve found with missing or improperly seated pins, KG&E repaired the valves as described in Section IV of this report.

#### IV. CORRECTIVE ACTIONS

Upon identification of the missing pins, KG&E initiated a Startup Field Report to document the deficiency and provide appropriate controls to assure resolution of the concern. As described in Section II of this report, all valves of the same type were disassembled and examined for missing or improperly seated pins in order to determine the extent of the problem.

All six Fischer Control, Type 9270, valves found with loose or missing pins were repaired per the manufacturers instructions. These repairs were witnessed and inspected by the manufacturers representative. (The repair process included a thorough cleaning of the tapered holes and new pins.) The pins were then coated with "loc-tite" and seated in the tapered holes with sharp hammer strikes on the large end of the pin. These repairs have all been completed and no additional problems have been encountered.