



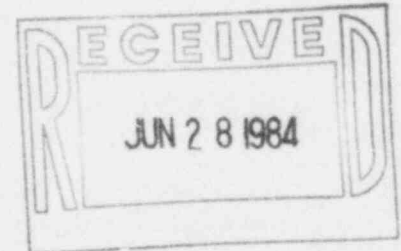
Public Service Company of Colorado

2420 W. 26th Avenue, Suite 100D, Denver, CO 80211

50-267

June 18, 1984  
Fort St. Vrain  
Unit No. 1  
P-84175

Mr. Eric Johnson  
Reactor Project Branch #1  
Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 1000  
Arlington, TX 76011



DOCKET NO. 50-267

SUBJECT: Failure of Masoneilan C-Domotor  
Actuator During Steam Line  
Rupture Simulation Testing

Dear Mr. Johnson:

This is to inform you of the corrective actions taken following the steam line rupture simulation testing during which the failure of a Masoneilan C-Domotor actuator occurred. The test was performed in order to qualify the actuator for a postulated hot reheat steam leak less than 10 feet from the actuator. During the test, the unit failed in the open position and would not close after receiving an actuation signal (15 psig).

Subsequent inspection revealed two causes for the failure. Failure of the three pressure gauges mounted on the actuator breached the pressure boundary of the air signal. This failure has been attributed to the melting of solder used to seal the gauges' bourdon tubes. The second cause for failure was due to melting of Buna-N O-rings internal to the positioner which bound up the actuator.

The following actions have been taken to prevent possible failures during an actual steam line break. Normally closed shutoff valves have been installed between the gauges and their taps (the gauges are used only for calibration). Gauges with welded stainless steel bourdon tubes were ordered and will be installed upon receipt. Viton O-rings were used to replace those made of Buna-N. Engineering

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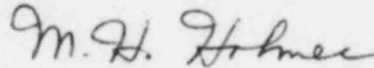
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analysis has confirmed that Viton is capable of withstanding the internal temperature occurring during a steam line break.

Only one actuator of this type installed at FSV would be subjected to the test conditions. It is mounted on the Loop 2 reheater discharge bypass line (PV-2268) and is required to open to allow flooding of the Loop 2 steam generator reheater section. The failure of the actuator during the test was in the safe direction.

This failure will be reported to INPO via the Nuclear Plant Reliability Data System.

Very truly yours,



*for* H. L. Brey, Manager  
Nuclear Engineering Division

HLB/SM:pa