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MIDDLE SOUTH UTILITIES SYSTEM

February 22, 1985

W3P85-0337
Q-3-A35.07.80
3-A1.01.04
A4.05

Mr. Robert D. Martin
Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Dear Mr. Martin:

Subject: Waterford 3 SES
Docket No. 50-382
SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 80
"Unsatisfactory Stroking of EFW Pump Turbine
Steam Supply Shut-off Valves"
Final Report

Reference: LP&L letter W3K84-2962 dated October 31, 1984

The referenced letter provided an interim report on SCD-80 with the Justification for Interim Operation. It stated that the final report would be submitted upon the completion of response time testing.

In accordance with the requirements of 10CFR50.55(e)(3), enclosed are two copies of the Final Report of SCD-80.

Very truly yours,

K.W. Cook

K.W. Cook
Nuclear Support & Licensing Manager

KWC:GEW:sms

cc: NRC, Director, Office of I&E
G.W. Knighton, NRC-NRR
D.M. Crutchfield, NRC-NRR
NRC Resident Inspectors Office
INPO Records Center (D.L. Gillispie)
E.L. Blake
W.M. Stevenson

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FINAL REPORT
OF SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 80
"UNSATISFACTORY STROKING OF EFW PUMP TURBINE STEAM SHUT OFF VALVES"

INTRODUCTION

This report is submitted pursuant to 10CFR 50.55(e). This report describes a deficiency in the automatic operation of valves 2MS-V611A and 2MS-V612B in the Main Steam System. This problem is considered reportable under the requirements of 10CFR50.55(e).

To the best of our knowledge this deficiency has not been reported to the USNRC pursuant to 10CFR21.

DESCRIPTION

During hot functional testing, automatic operation of valves 2MS-V611A and 2MS-V612B were found to be unsatisfactory. Stroking of the valves was not smooth, and excessive force was needed to open the valves. The vendor representative was called in to look into the problem. With new springs and proper lubrication to overcome the friction, the valves were stroked several times before completion of the hot functional testing, however, the stroking was still deemed unsatisfactory due to the hesitation experienced in opening of the valves.

SAFETY IMPLICATIONS

These valves are located in the steam supply line to the emergency feedwater pump turbine. This steam supply is a diverse power source used to ensure that the Emergency Feedwater System (EFS) is capable of performing its function with complete loss of AC power. The function of the EFS is to ensure a sufficient supply of cooling water to the steam generators following a main steam or feedwater line break or loss of normal feedwater to provide cooldown of the Reactor Coolant System to the temperature and pressure at which the Shutdown Cooling System can be placed into operation. Therefore, failure of the above valves to open would adversely affect the safe shutdown of the plant if left uncorrected.

CORRECTIVE ACTION

The pneumatic operators for the valves 2MS-V611A and 2MS-V612B have been replaced with D-C motors. The valves have been tested during cold conditions and hot functional testing and in all instances operated satisfactory. During hot functional testing the valves opened in 8.01 and 9.23 seconds, respectively. These valves are required to fully open within 25 seconds in order to support the minimum Emergency Feedwater Control "lo-lo" setpoint analyses.

Problems which occur during routine eighteen month surveillance tests will be handled in accordance with administrative procedures and technical specifications.