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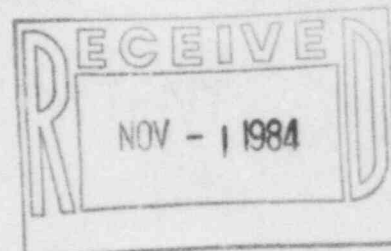
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MIDDLE SOUTH
UTILITIES SYSTEM

October 31, 1984

W3P84-2962
Q-3-A35.07.80
3-A1.01.04

Mr. John T. Collins
Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76011



Dear Mr. Collins:

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

Reference: LP&L letter W3K84-2105 dated September 5, 1984

The referenced letter indicated that closure of the subject deficiency was contingent on completion of Post Core Hot Functional Testing. In accordance with the requirements of 10CFR50.55(e)(3), closed is an interim report on SCD-80 with the Justification for Interim Operation. A final report will be submitted upon the completion of response time testing during Post Core Hot Functionals which is currently planned for early December and prior to initial criticality.

Very truly yours,

K.W. Cook
Nuclear Support & Licensing Manager

KWC:GEW:sms

cc: NRC, Director, Office of I&E
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INTERIM REPORT
OF SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 80
"UNSATISFACTORY STROKING OF EFW PUMP TURBINE STEAM
SHUT OFF VALVES"

W3P84-2962

INTRODUCTION

This report is submitted pursuant to 10CFR50.55(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-611A 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 could adversely affect the safe shutdown of the plant if left uncorrected.

CORRECTIVE ACTION TAKEN

NCR W3-6115 was initiated to track and document this deficiency. Anchor-Darling, the supplier of the above valves, concluded their site evaluation on these valves and submitted a report on April 29, 1983. In summary, the vendor stated that it was his opinion that the existing valves and operators would function properly and were adequate for their intended service.

However, reworking the valves (i.e. Replace springs, lapping of seat surfaces, etc.) per the vendors recommendation proved to be unsatisfactory during hot functional testing.

It had been previously determined by Ebasco Engineering that; if, after re-testing, per the vendor's recommendation, the valve's operation was still deemed unsatisfactory, an alternate solution, such as changing from pneumatic to motor operators, would be implemented for Corrective Action.

A test on a prototype valve was conducted during September 1983, at Crosby Valve test facility to assure its operability under simulated operating conditions. The test was conducted as outlined in "Emergency Feedwater Pump Turbine Steam Isolation Valves Test Outline", Rev. 2 dated July 30, 1983. This test was conducted in two steps. First using a pneumatic operated valve assembly and then using a motor operated valve assembly. The results of the test showed that the valve operation using the pneumatic operator was not satisfactory. However, with the motor operator, the valve operation was satisfactory and consistent. DCN MP-853 was issued on 10/10/83 to install motor operators instead of air operators on these valves. These motor operators are DC powered to ensure operability under complete loss of AC power conditions. The FSAR has been appropriately revised in the Amendment 34.

JUSTIFICATION FOR INTERIM OPERATION

The remaining corrective actions require response time testing of valves 2MS-V611A and 2MS-V611B during post core hot functionals when steam is available to operate EFW pump A/B. This retesting will include operation of the valves under differential pressure at temperature and cold quick starting of the pump to retest the governor control system.

Waterford 3 Draft Technical Specification 3.7.1.2 requires at least three independent steam generator emergency feedwater pumps and associated flow paths be "OPERABLE" in Modes 1, 2 and 3 with (a) two feedwater pumps, each capable of being powered from separate "OPERABLE" emergency buses, and (b) one feedwater pump capable of being powered from an "OPERABLE" steam supply system.

Surveillance Requirements 4.7.1.2.a and c state that the provisions of Specification 4.0.4 are not applicable for entry into Mode 3 for the turbine driven pump, thus allowing for operability testing of the turbine driven pump after entering Mode 3.

If the operability of the turbine driven emergency feedwater pump cannot be demonstrated during post core hot functional retesting, LCO Action Statement 3.7.1.2.a will be compiled with.