



LOUISIANA
POWER & LIGHT

142 DELARONDE STREET
P. O. BOX 6008 • NEW ORLEANS, LOUISIANA 70174 • (504) 366-2345

July 22, 1981

D. L. ASWELL
Vice President-Power Production

W3K-81-0263
Q-3-A35.07.24
Q-3-A35.02.01

Mr. K. V. Seyfrit, Director, Region IV
U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

SUBJECT: Waterford SES Unit No. 3
Docket No. 50-382
Final Report of Significant Construction
Deficiency No. 24
"Defective Valve Manual Operators (Fisher Controls)"



Reference: LP&L Letter W3K-81-0128 dated March 16, 1981

Dear Mr. Seyfrit:

In accordance with the requirements of 10CFR50.55(e), we are hereby providing two copies of the Final Report of Significant Construction Deficiency No. 24, "Defective Valve Manual Operators (Fisher Controls)".

If you have any questions, please advise.

Very truly yours,

D. L. Aswell

D. L. Aswell

LLB:grf

Attachment

- cc: 1) Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555
(with 15 copies of report)
- 2) Director
Office of Management
Information and Program Control
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555
(with 1 copy of report)

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LOUISIANA POWER AND LIGHT COMPANY

WATERFORD 5'S UNIT NO. 3

Final Report of
Significant Construction Deficiency No. 24

"Defective Valve Manual Operators (Fisher Controls)"

Reviewed by *John DeBruin & J. D. Padalino* *7/14/81*
J. D. Padalino - Project Engineer Date

Reviewed by *J. E. Wills* *7/7/81*
J. E. Wills - Project Superintendent Date

Reviewed by *J. Hart* *7-13-81*
for J. Hart - Project Licensing Engineer Date

Reviewed by *R. L. Hymes* *7-14-81*
for R. L. Hymes - Project Quality Assurance Engineer Date

July 1, 1981

FINAL REPORT OF
SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 24
"DEFECTIVE VALVE MANUAL OPERATORS (FISHER CONTROLS)"

INTRODUCTION

This report is submitted pursuant to 10CFR50.55(e). It describes defects inherent in the cast iron worm gear sector of the manual valve operators supplied by Fisher Controls. This problem is considered reportable under 10CFR50.55(e). On February 23, 1981, Mr. L. Fleetwood, Q. A. Manager with Fisher Controls Company notified the Nuclear Regulatory Commission of this defect.

DESCRIPTION

Fisher Controls reported recent life cycle tests have resulted in the necessity to reduce the rated output of Size 2 Type 1073, 1074, 1075, and 1076 manual operators built with the cast iron worm gear sector. The basis for reducing the rated output is that at the 8000 in-lbs output torque, the worm gear sector exhibits initiation of fatigue resulting in subsequent failure.

The valves in question include two containment sump isolation valves and two refueling water storage pool isolation valves. The failure of the manual operators could cause a substantial degradation of the safety injection system.

SAFETY IMPLICATIONS

If the refueling water storage pool isolation valves fail to operate, there would be no water available for the containment spray injection mode following a Loss of Coolant Accident (LOCA) or Main Steam Line Break (MSLB).

If the containment sump isolation valves fail to operate, there would be no water available for the containment spray recirculation mode following a LOCA or MSLB.

In either case, this could have serious implications for the control of the containment pressure/temperature and/or airborne radioactive material after a LOCA or MSLB.

CORRECTIVE ACTION

Corrective repairs consisted of replacing the defective worm gear sector with a manganese bronze worm gear sector (1-3/8" wide face) which increases the actuator output rating to 16,000 in-lbs. Also, the 3/16" pin between the input shaft and worm gear has been changed to a 1/4" diameter pin.

The valve tag numbers affected are 2SI-L101A, 2SI-L102B, 2SI-L103A, 2SI-L104B.

The repairs were completed and inspected on June 25, 1981, and are documented on Ebasco Permanent Plant Equipment Service Form Numbers ESU-81-5-64, ESU-81-5-65, ESU-81-5-66 and ESU-81-5-67.