



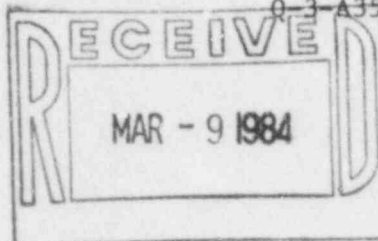
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March 2, 1984

W3K84-0469

0-3-A35.07.83



Mr. John T. Collins
Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

REFERENCE: LP&L Letter W3K84-0052 dated January 9, 1984

Dear Mr. Collins:

SUBJECT: Waterford SES Unit No. 3
Docket No. 50-382
Significant Construction Deficiency No. 83
"Heat Tracing Design Deficiencies Identified During Hot
Functional Testing"
Final Report

In accordance with the requirements of 10CFR50.55(e), we are hereby providing two copies of the Final Report of Significant Construction Deficiency No. 83, "Heat Tracing Design Deficiencies Identified During Hot Functional Testing."

If you have any questions, please advise.

Very truly yours,

T. F. Gerrets
Corporate Quality Assurance Manager

TFG:CNH:VBR

Attachment

cc: Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555
(15 copies)

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Mr. John T. Collins
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cc: Director
Office of Management
Information and Program Control
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. E. L. Blake
Shaw, Pittman, Potts, & Trowbridge
1800 M Street, N.W.
Washington, D.C. 20036

Mr. W. M. Stevenson
Monroe & Lemann
1424 Whitney Building
New Orleans, Louisiana 70130

FINAL REPORT OF
SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 83
"HEAT TRACING DESIGN DEFICIENCIES IDENTIFIED DURING HOT FUNCTIONAL TESTING"

INTRODUCTION

This report is submitted pursuant to 10CFR50.55(e). The report describes "electrical noise" deficiencies with the safety related heat trace "A" and "B" panels. This problem is considered reportable pursuant to the requirements of 10CFR50.55(e). To the best of our knowledge this problem has not been reported to the USNRC pursuant to 10CFR21.

DESCRIPTION

During prerequisite testing of the boric acid system heat tracing, electrical noise on temperature sensing thermocouple extension cables was found to cause premature operation of over-temperature cutouts and alarms. These circuits are utilized to control the temperature of the boric acid system and prevent precipitation during normal operation.

SAFETY IMPLICATION

Failure or misoperation of the boric acid heat tracing circuits, if left uncorrected, could cause precipitation of boric acid and prevent proper operation of the boron injection system thereby impairing safe shutdown.

CORRECTIVE ACTION

NCR-W3-6134 has been initiated to track and document this deficiency.

Evaluation by Chemelex has determined that "electrical noise" will be suppressed by adding capacitors and revising the termination scheme. The capacitors were added to the high temperature cutout modules to prevent spurious or false tripping of this device. The termination scheme was revised to attach the shield wire directly to the thermocouple head in lieu of the negative thermocouple lead. This new termination scheme allows the common mode noise rejection circuitry to function as designed. Implementation of Chemelex's corrective action has been completed under NCR-W3-6134.

Corrective action and supporting documentation has been reviewed and the NCR has been closed.

This report is submitted as the final report.