



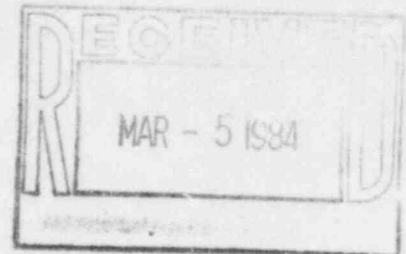
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February 27, 1984

W3K84-0410
Q-3-A35.07.88

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 W3K83-1958 dated December 13, 1983

Dear Mr. Collins:

SUBJECT: Waterford SES Unit No. 3
Docket No. 50-382
Significant Construction Deficiency No. 88
"Refueling Water Storage Pool Liner/Nozzle Overstressed Condition"
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. 88, "Refueling Water Storage Pool Liner/Nozzle Overstressed Condition".

If you have any questions, please advise.

Very truly yours,

T. F. Gerrets
Corporate Quality Assurance Manager

TFG:CNH:JC

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

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Mr. J. T. Collins
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FINAL REPORT OF
SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 88
"REFUELING WATER STORAGE POOL LINER/NOZZLE
OVERSTRESSED CONDITION"

INTRODUCTION

This report is submitted pursuant to 10CFR50.55(e). It describes deficiencies that existed in two Storage Pool Liner interface connections with the pool liner plates overstressed at the connections.

This problem is considered reportable under the requirements of 10CFR50.55(e). To the best of our knowledge this problem has not been identified to the USNRC pursuant to 10CFR21.

DESCRIPTION

As a result of the stress analysis on the two Refueling Water Storage Pool 24" Nozzles using as-built piping loads, it was discovered that the pool liner plate is overstressed at the nozzle connection.

Stress analyses were extended to all nozzles located at the following structures, as a verification of the adequacy of the liner/nozzle interface connections:

- 1) Reactor Auxiliary Building
 - a) Condensate Storage Pool
- 2) Fuel Handling Building
 - a) Spent Fuel Storage Pool
 - b) Spent Fuel Cask Storage Area
 - c) Spent Fuel Cask Decontamination Area
 - d) Refueling Canal
- 3) Reactor Building
 - a) Refueling Water Storage Pool

In addition to the Refueling Water Storage pool nozzles the above analyses disclosed that the pool liner plate on the two Condensate Storage Pool 6" nozzles are also overstressed at the nozzle connections.

All other analyses indicated that the liner/nozzle interface connections were adequate.

SAFETY IMPLICATIONS

If left uncorrected, the applications of as-built piping loads could have overstressed the liner/nozzle interface connections of the Refueling Water Storage Pool and the Condensate Storage Pool. This could result in performance degradation of the Emergency Core Cooling System, the Containment Spray System, and the Emergency Feedwater System.

CORRECTIVE ACTION

The design modifications to correct this significant deficiency were implemented by issuance of DCN's - NY-AS-650 and 659.

- 1) Reactor Auxiliary Building
 - a) Condensate Storage Pool - DCN-AS-659 added two restraints to reduce pipe forces being transmitted to the pool liner.
 - b) Refueling Water Pool - DCN-AS-650 added two restraints to reduce pipe forces being transmitted to the pool liner.
- 2) Fuel Handling Building
 - a) Spent Fuel Storage Pool - Analysis showed liner stresses were within allowable limits.
 - b) Spent Fuel Cask Storage Area - Analysis showed liner stresses were within allowable limits.
 - c) Spent Fuel Cask Decontamination Area - Analysis showed liner stresses were within allowable limits.
 - d) Refueling Canal - Analysis showed liner stresses were within allowable limits.
- 3) Reactor Building
 - a) Refueling Pool - Analysis showed liner stresses were within allowable stresses.

Restraints were added to Nozzles PF-13 and PF-14 of the Condensate Storage Pool and nozzles PF-4 and PF-5 of the Refueling Water Storage Pool. This reduced pipe forces on the liner, transmitted by the nozzle, to ensure the liner is within allowable stresses. All corrective actions have been completed.

This report is submitted as the Final Report.