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POWER & LIGHT

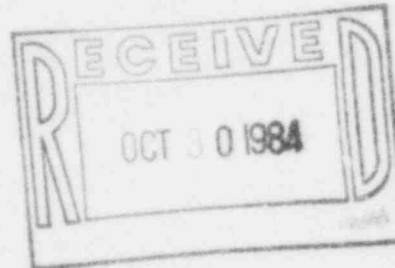
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MIDDLE SOUTH
UTILITIES SYSTEM

October 24, 1984

W3P84-2959
Q-3-A35.07.60
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 76012



Dear Mr. Collins:

Subject: Waterford 3 SES
Docket No. 50-382
SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 60
"Turnover Documentation and Inadequate Hanger Weld Problems"
Final Report

Reference: LP&L letter W3P84-2656 dated September 21, 1984

The referenced letter stated that the final report on SCD-60 would be submitted by October 22. In accordance with the requirements of 10CFR50.55(e)(3) enclosed are two copies of the LP&L final report on SCD-60.

Very truly yours,

K.W. Cook
Nuclear Support & Licensing Manager

KWC:GLW:sms

cc: NRC, Director, Office of I&E (15 copies)
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FINAL REPORT OF SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 60 R-2

"TURNOVER DOCUMENTATION AND INADEQUATE HANGER WELD PROBLEMS"

TOMPKINS - BECKWITH

INTRODUCTION

This report is submitted pursuant to 10CFR50.55(e). It describes a breakdown that existed in the Quality Control/Quality Assurance Programs of Tompkins-Beckwith, Inc., Ebasco Services, Inc. and Louisiana Power & Light Company. This breakdown allowed for pipe supports/restraints to be installed by Tompkins-Beckwith, Inc. which did not comply with design and installation drawings nor with AWS requirements. This condition is considered reportable under the requirements of 10CFR50.55(e).

To the best of our knowledge, this problem has not been identified to the Nuclear Regulatory Commission pursuant to 10CFR21.

DESCRIPTION

Upon receipt of turnover documents for Start-Up System 60B - Low Pressure Safety Injection, Louisiana Power & Light QA performed an audit of documentation for pipe support/restraint installations contained in the turnover package. Discrepancies were identified which included: installations which were not in accordance with the design documents, welds that differed from the design documents, detail drawings which did not meet AWS D1.1 requirements, field welds which were not made per the as-built drawings. This condition indicated a breakdown in the Quality Assurance programs of Tompkins-Beckwith, Inc., Ebasco Services, Inc., and Louisiana Power & Light Company in that the Tompkins-Beckwith (T&B) turnover packages which were submitted contained discrepancies between the final Quality Assurance/Quality Control certification and the actual as-built condition.

The original scope included hangers completed and accepted prior to July 6, 1982. This is approximately 4,500 hangers. After evaluation of LP&L audits 3S and 6S, along with concerns expressed by the Construction Appraisal Team, the supports which are contained in the set defined below have been added to the scope of this SCD. The set (approximately 4,000 hangers) is defined as the Seismic I hangers which are readily accessible for inspection and utilized one of the following components: spring, snubber, sway strut, U-bolt or rod. Box type/structural steel supports and anchors were excluded as the concerns raised were not applicable to these designs.

SAFETY EVALUATION

The discrepancies as described in the original scope occurred on Safety Class 1, 2, 3 and Seismic Category 1 systems required to mitigate the consequences of an accident and bring the plant to a safe shutdown condition. The discrepancies as known, could have detracted from the ability of these systems to perform their function under SSE conditions.

The initial phase of the inspection program outlined above has been completed. There were 920 hangers inspected under this initial phase. Engineering analyses indicate the rework items identified would not cause any system failure if left uncorrected. In addition, the last phase of the walkdown, to date, has not identified any items which would detract from the ability of these systems to perform their function under SSE conditions.

CORRECTIVE ACTION

A plan of Corrective Action was developed to address the Quality Assurance Program breakdown. This plan was first to address the correction of deficiencies in the implementation of the Quality Assurance Program and, second to address the deficiencies in the installed pipe supports/restraints and their documentation.

Tompkins-Beckwith retrained their Hanger Engineering Personnel and Quality Control Inspectors with particular emphasis on field inspection of support/restraints and documentation requirements for as-built records. T&B Quality Assurance Department performed surveillances of the reinspection to verify the effectiveness of the retraining program.

Ebasco Services, Incorporated retrained Quality Assurance Personnel involved in the review of pipe support/restraint packages, to the requirements for acceptance of the documentation packages.

Upon completion of retraining, T&B Quality Control and Engineering reinspected hangers which were completed and accepted prior to July 6, 1982. Deficiencies detected during reinspection were evaluated, dispositioned and tracked under NCR-W3-4010.

The evaluation of deficiencies noted during the reinspection of hangers under the original scope of the SCD resulted in dispositions which were applied to hangers installed by Tompkins-Beckwith. These changes were incorporated into Tompkins-Beckwith's program of nonconformance dispositions, redlines, and/or FCR's as applicable.

Documentation packages were reviewed, after reinspection, by Tompkins-Beckwith with support from Ebasco Services. Reviewed packages were then submitted to Ebasco Quality Assurance for review and approval. Review of the hanger packages by Ebasco Quality Assurance is complete and packages are in the process of being transferred to Louisiana Power & Light.

Tompkins-Beckwith qualified existing prequalified AWS D1.1 fillet weld procedures and verified the acceptability of performing multipass fillet welds using smaller diameter electrodes. This verified the acceptability of specifying and performing fillet welds sized smaller than the AWS D1.1 prequalified requirements.

LP&L Quality Assurance participated in both Tompkins-Beckwith's and Ebasco's retraining programs. In addition, LP&L performed surveillances/audits to verify compliance with the committed corrective actions.

An evaluation of the results of LP&L's audits 3S and 6S and CAT concerns resulted in an inspection program (per LP&L QSAP 19.7) to verify items such as upset threads, cotter pins, locknuts, strut alignment, and damaged items. The scope of this inspection includes:

1. Springs
2. Snubbers
3. Sway Struts
4. U-Bolts
5. Rods

Approximately 4,000 hangers have been inspected under this program. The deficiencies being addressed by this inspection have not represented any safety significance. The results will be placed in the SCD package as further evidence that the support/restraints will perform their design functions. Furthermore, the level of effort expended on this SCD are considered to be appropriate to provide reasonable assurance that no safety problems exist on hangers not addressed in this inspection. Therefore, any newly identified hanger discrepancies shall be dispositioned on a routine maintenance basis and will not be considered part of this SCD.

This report is submitted as the Final Report.