

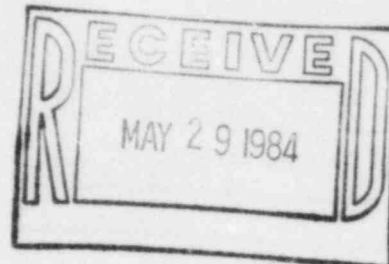


LOUISIANA
POWER & LIGHT / INTER-OFFICE CORRESPONDENCE

May 22, 1984

W3K84-1218
Q-3-A35.07.57

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 W3K84-0812 dated April 5, 1984

Dear Mr. Collins:

SUBJECT: Waterford SES Unit No. 3
Docket No. 50-382
Significant Construction Deficiency No. 57
"Inadequate Instrumentation and Control Installations Turnover
Documentation"
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. 57, "Inadequate Instrumentation and Control Installations Turnover Documentation".

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

May 22, 1984

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

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FINAL REPORT
SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 57
"INADEQUATE INSTRUMENTATION AND CONTROL
INSTALLATIONS AND TURNOVER DOCUMENTATION"

INTRODUCTION

This final report is submitted pursuant to 10CFR50.55(e). It describes Instrumentation and Control (I&C) System Installations which were not in accordance with the design specifications. Additionally, the recently prepared system "as-built" drawings did not accurately reflect the actual installed conditions. These problems are considered reportable under the requirements of 10CFR50.55(e). To the best of our knowledge, this problem has not been reported to the Nuclear Regulatory Commission pursuant to 10CFR21.

DESCRIPTION

In preparation for ECCS Flow Testing and Primary System Cold Hydrostatic Testing, Mercury Company of Norwood, Inc. (Installation Contractor for Instrumentation and Control Systems), submitted their installation, inspection, and test documentation and "as-built" drawings for the following plant start-up systems:

- a) Start-Up System (SUS) No. 59 - Containment Spray
- b) SUS No. 60A - High Pressure Safety Injection
- c) SUS No. 60B - Low Pressure Safety Injection
- d) SUS No. 60C - Safety Injection Tanks

The Mercury submittal contained exceptions such that final Quality Assurance/Quality Control certification was not provided.

Audits of the I&C System documentation in conjunction with As-Built Drawing review and walkdown surveillance revealed the following:

- a) The "As-Built" drawings did not accurately depict existing installations. The problems consisted of (1) incorrect slope indications for tubing runs, (2) incorrect designations for seismic supports, (3) dimensional errors, and (4) inadequate design consideration for thermal expansion of tubing.
- b) The actual installations had the following physical problems: (1) tubing runs with reverse slope, (2) uninstalled supports, (3) improper bolting and (4) tube touching track or bolt heads thereby causing tube deformity.

As a result of the system walkdown on SUS 60B, the Mercury Co. was informed of the deficiencies noted above.

After Mercury reworked I&C installations associated with Start-Up System 60B and Mercury's Quality Control organization accepted the rework, many of the same generic-type problems were found to exist.

SAFETY IMPLICATIONS

Instrumentation associated with these systems are Safety Class 2 and 3. The subject instruments are required for plant parameter monitoring and for safe shutdown of the plant. If the deficiencies were left uncorrected, degradation could have occurred resulting in failure of the instruments to provide reliable information required by the Reactor Operators.

CORRECTIVE ACTION

On June 23, 1982, Mercury Company of Norwood, Inc., by direction of the Engineer, initiated implementation of the following corrections:

- a) Reassigned crafts off safety-related systems installations and rework.
- b) Identified rework teams of Craft, Foremen, Field Engineers, QC Inspector and Supervision who, upon completion of the retraining program satisfactory to the Engineer, proceeded with rework required for acceptable construction completion, documentation, and turnover of the aforementioned systems.
- c) Developed documented retraining program, related to correcting the problems encountered.
- d) After approval by the Engineer, this retraining program was implemented under the review of the Engineer with the rework teams identified in (b) above.
- e) Subsequent to concurrence by the Engineer that this retraining program was properly executed for the teams, the Engineer authorized reassignment of craft to safety-related work.
- f) The retraining program was extended to all Mercury personnel consistent with a training schedule.
- g) Organizational changes were implemented resulting from a meeting with LP&L and Ebasco on June 24, 1982.

The retraining of Mercury personnel was performed in accordance with the Ebasco approved training program. The Training Program addressed project and Mercury Quality Program requirements with particular emphasis on deficient areas described in this SCD. The training addressed the general program requirements as well as the specific requirements for the Construction, Engineering, and Quality Assurance organizations within Mercury.

Mercury was allowed to begin safety related work, using personnel that had completed the retraining program. Walkdown teams were formed, comprised of Mercury Engineering and Quality Control, Ebasco Construction Engineering and Louisiana Power & Light Quality Assurance, to reinspect the systems. The walkdown teams generated punchlists of their findings. The punchlist items were addressed as required by Mercury's Quality Program. Upon completion of the required rework, Mercury Isometrics were walked down, revised as necessary, and signed as "as-built" drawings.

Additionally, Ebasco placed personnel in the contractors engineering, and construction departments to assure corrective actions were effective and the work performed subsequent to the identification of the deficiencies met project requirements. Also, Ebasco supplemented Mercury management personnel to assure completion of the contract in accordance with project requirements.

All corrective action is completed on SCD No. 57 and the applicable documentation has been reviewed.

This report is submitted as the Final Report.