

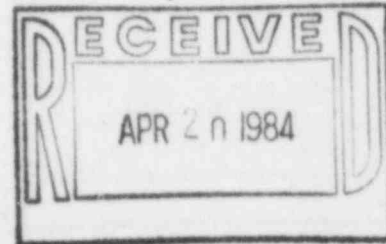


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April 16, 1984

W3K4-0869  
Q-3-A35.07.105



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

REFERENCE: Telecon C. Hooper (LP&L) and W. Crossman (NRC, Region IV)  
on March 16, 1984

Dear Mr. Collins:

SUBJECT: Waterford SES Unit No. 3  
Docket No. 50-382  
Significant Construction Deficiency No. 105  
"Electrical Separation Deficiencies (Regulatory Guide 1.75)"  
First Interim Report

In accordance with the requirements of 10CFR50.55(e), we are hereby providing two copies of Significant Construction Deficiency No. 105, "Electrical Separation Deficiencies (Regulatory Guide 1.75)". This item had been previously reported as PRD No. 159.

Very truly yours,

*T. F. Gerrets*  
T. F. Gerrets

Corporate Quality Assurance Manager

TFG:CNH:SSTG

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

Director  
Office of Management  
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U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

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Mr. John T. Collins  
April 16, 1984  
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Institute of Nuclear Power Operations  
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INTERIM REPORT OF  
SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 105  
"ELECTRICAL SEPARATION DEFICIENCIES"

INTRODUCTION

This report is submitted pursuant to 10CFR50.55(e). During the first phase of the Construction Appraisal Team (CAT) Audit at the Waterford-3 Site, (February 13-25), deviations from the FSAR commitment to IEEE 384-1974 (Criteria for Separation of Class 1E Equipment and Circuits) as endorsed by Regulatory Guide 1.75 (Physical Independence of Electric Systems), were noted by inspectors.

To the best of our knowledge, this deficiency has not been reported to the USNRC pursuant to 10CFR21.

DESCRIPTION

Design drawings detail the requirements for physical separation between redundant Class 1E raceways and between Class 1E and non-Class 1E raceways in order to implement the commitments of the FSAR. FSAR Section 8.3.1.2.19 sets forth the Waterford-3 commitment to IEEE 384-1974 as endorsed by Regulatory Guide 1.75. It states that separation of one foot horizontal and three vertical in the cable vault, and three feet horizontal and five vertical in general plant areas should be maintained. When these separation distances cannot be maintained, the raceways should be enclosed and separated by a minimum of 1 inch. When 1 inch separation cannot be maintained, the raceways should be enclosed and a flame retardant material shall be placed between the raceways to provide the equivalence of 1 inch separation in air. During the CAT Audit, inspectors noted instances where neither cable tray covers nor fire barriers were provided when the separation distances outlined above could not be maintained.

SAFETY IMPLICATIONS

A majority of the deviations from the FSAR commitments have been directly related to the fact that planned installation of cable tray covers had not commenced at the time of the audit. The original plan called for a walkdown of cable raceways to determine those installations which require interposing barriers in accordance with the design criteria. However, the procedures did not require inspection of non-safety related conduit for separation from safety-related installations, and they would not, therefore, have fully ensured that the FSAR commitments to physical and electrical separation would be met.

CORRECTIVE ACTION

Criteria has been established by Ebasco NY Engineering for acceptability of installations by type of situation. This criteria, in conjunction with existing details for barrier installation, forms the basis for acceptance or corrective action assignment for identified discrepancies.

Per existing design, separation may be achieved via the installation of tray covers, in lieu of separation of the items by spatial distance alone. For the 31,179 feet of tray to be installed in nuclear plant areas, 13,026 feet of tray cover and fittings were purchased in 1977. This material has been stored on site pending the completion of cable installation.

A walkdown is being performed on electrical raceways in nuclear plant areas to identify discrepancies in installations with respect to existing separation design requirements. Identification of tray cover requirements, which is a part of the installation program, will also take place as part of this walkdown. A dedicated automatic sprinkler system has been provided for the electrical penetration area (El. +35.00) and the cable vault. In these areas, it was never the intent to provide cable tray covers and thereby defeat the protection afforded by the dedicated suppression system.

This program is an engineering walkdown and is performed in accordance with ASP-IV-141 and under the surveillance of LP&L Quality Assurance. Identified problems will be resolved via rework of the raceway, installation of barriers or evaluation and acceptance by ESSE.

Ebasco Procedure CP-764 will be revised to require a QC Inspection of non-safety related conduit installation to identify discrepancies in separation requirements. Engineering and Quality Control personnel have been trained in separation requirements. Construction supervision will be retrained in these requirements.

A final report will be submitted on or before May 25, 1984.