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PDR
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March 6, 1981

D. L. ASWELL
Vice President-Power Production

W3K81-0105
Q-3-A35.07.22
Q-3-A35.02.01

Mr. K. V. Seyfrit, Director, Region IV
U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
611 Ryan Plaza Drive, Suite 1000
Arlington, Texas 76012

SUBJECT: Waterford SES Unit No. 3
Docket No. 50-382
Interim Report of Significant
Construction Deficiency No. 22
"Inadequate Electrical Insulation on Ex-Core
Neutron Flux Detectors"



REFERENCE: Telecon - L. L. Bass (LP&L) to B. Crossman (NRC) on 2/6/81

Dear Mr. Seyfrit:

In accordance with the requirements of 10CFR50.55(e), we are hereby providing two copies of the Interim Report of Significant Construction Deficiency No. 22, "Inadequate Electrical Insulation on Ex-Core Neutron Flux Detectors."

If you have any questions, please advise.

Very truly yours,

D. L. Aswell

DLA/LLB/grf

- cc: 1) Director
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555
(with 15 copies of report)
- 2) Director
Office of Management
Information and Program Control
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555
(with 1 copy of report)

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LOUISIANA POWER & LIGHT COMPANY

WATERFORD SES UNIT NO. 3

Interim Report of
Significant Construction Deficiency No. 22

Inadequate Electrical Insulation on Ex-Core Neutron Flux Detectors

Reviewed by J. Milhiser for RGM. 3/5/81
R. J. Milhiser - Site Manager Date

Reviewed by J. Wills 3/5/81
J. Wills - Project Superintendent Date

Reviewed by J. Hart (Per Telex) 3-5-81
J. Hart - Project Licensing Engineer Date

Reviewed by L. A. Stinson 3/5/81
L. A. Stinson - Site Q. A. Program Manager Date

March 5, 1981

SIGNIFICANT CONSTRUCTION DEFICIENCY NO. 22

INTERIM REPORT

INADEQUATE ELECTRICAL INSULATION ON EX-CORE NEUTRON FLUX DETECTORS

INTRODUCTION

This report is submitted pursuant to 10CFR50.55(e). It describes deficiencies in the electrical insulation of the Ex-Core Neutron Flux Detectors.

DESCRIPTION

Combustion Engineering Incorporated (C.E.) notified the Ebasco Site Manager, through letter No. C-CS-9270-263 dated 12/24/80, that the present insulation between the Ex-Core Detector and the holder assembly (Astroquartz) is inadequate to maintain proper electrical insulation over the life of the detector and that the insulation will be replaced by a more durable material (Refrasil). Additionally, C.E. submitted procedures for the removal of the present insulation and the rewrap and subsequent testing of the Refrasil insulation.

These detectors were received at Waterford SES Unit No. 3 on February 8, 1980, and are currently in storage in the 1-A Warehouse.

SAFETY IMPLICATIONS

Based on the information submitted, Licensing has determined that this condition is a reportable incident because if the insulation had not been replaced, electrical contact could develop between the detector and the holder assembly. This could lead to performance degradation and/or total loss of the detector. Since these detectors are used as input to the Reactor Protective System (RPS) to initiate Engineered Safety Features (ESF) if off-normal conditions are detected, their uncompromised operation is required. Therefore, the presence of inadequate insulation could result in a degradation of safety-related systems.

CORRECTIVE ACTION

Modifications to effect corrective action have been provided by Combustion Engineering through Field Action Request (FAR) No. 106W. In summary, the modification procedure outlines the following steps:

The detector assembly must be opened, and the detectors fastened to the stiffener to retain their same relative position with respect to the holder. They are then lifted from the holder assembly. While the holder is opened, the old astro quartz insulating mat is removed and replaced with the new material.

The actual rewrap will require HITCO Type C100-48 woven silica cloth surrounding each detector, insulating it from the detector holder. Before and after the modification, resistance readings are taken to assure the adequacy of the repair procedure.

The final step involves caulking the entire perimeter of the detector assembly where the two halves come together to prevent debris and other foreign matter from entering the holder assembly.

Discussion between Ebasco and Combustion Engineering is currently under way to determine the location where rework will be accomplished. The location where this rework is effected will be identified in the final report to be submitted on or before July 31, 1981.