# PHILADELPHIA ELECTRIC COMPANY

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AUG 3 0 1984

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Mr. Thomas F. Murley, Director United States Nuclear Regulatory Commission Office of Inspection and Enforcement, Region 1 631 Park Avenue King of Prussia, PA 19406

SUBJECT: Significant Deficiency Report #153

Final Report on Defective General Electric

Relay Connection Plugs

Limerick Generating Station Units 1 and 2 NRC Construction Permits Nos. CPPR-106 & 107

REFERENCE:

Telecon of August 24, 1984

P. K. Pavlides (PECO) to Jane Grant (USNRC)

FILE:

QUAL 2-10-2 (SDR#153)

Dear Mr. Murley:

The enclosure to this letter is provided as a final report concerning improperly sized General Electric relay connection plugs at the Limerick Generating Station (LGS). Previous information was forwarded to the USNRC via the reference.

Sincerely,

MHH:tws ts8278411008 Attachment

Copy to: Director of Inspection and Enforcement United States Nuclear Regulatory Commission Washington, DC 20555

S. K. Chaudhary, Resident NRC Inspector (Limerick)

J. Wiggins, Resident NRC Inspector (Limerick)

Limerick Generating Station
Significant Deficiency Report #153
Defective General Electric Relay Connection Plugs
Final Report

## 1.0 Introduction

This report is intended as a final report concerning defective General Electric relay connection plugs at the Limerick Generating Station (LGS).

The USNRC was notified of this reportable condition in a telecon, dated August 24, 1984.

## 2.0 Description of Problem

Initially, "snug-fitting" relay connection plugs were a nuisance. It was difficult to insert the connection plug into the relay. Once inserted, force was required to remove the plug.

However, during testing, protective relays had sporadically failed to trip the breakers. This problem was linked only to relays containing "snug-fitting" connection plugs.

The matter was investigated. The vendor explained that the snug-fitting plugs were improperly sized connection plugs furnished with the relays. When inserted, the problem plug wedges in the relay and may become cocked so as to open the trip circuit contacts.

#### 3.0 Safety Implications

The problem connection plugs were furnished with relays located in the 13kV and 2.3kV, as well as the safeguard 4kV switchgear at LGS. A defective connection plug resulting in loss of the relay's trip circuit continuity could adversely affect the operation of safety-related equipment and the safeguard switchgear.

#### 4.0 Corrective Action

Properly sized relay connection plugs were obtained from General Electric. These plugs were used as replacement plugs in the Unit 1 safeguard relays and those Unit 2 safeguard relays required for Unit 1 operation. A non-conformance report has been written to track the replacement of the plugs in the remaining Unit 2 safeguard relays.

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