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THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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MURRAY R. EDELMAN
VICE PRESIDENT
NUCLEAR

July 25, 1985

PY-CEI/OIE 0086 L

Mr. James G. Keppler
Regional Administrator, Region III
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

RE: Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
Voltage Drop Evaluation
[RDC 142(85)]

Dear Mr. Keppler:

This letter is the final report pursuant to 10CFR50.55(e) concerning the potential for insufficient voltage to some equipment when source voltage is degraded and/or when long cable lengths are used to supply the equipment. This deficiency was reported by telephone to Mr. R. Knop of your office on June 25, 1985 by Mr. B. D. Walrath of The Cleveland Electric Illuminating Company. This deficiency has been evaluated per Deviation Analysis Report 246.

Description of Deficiency

A review was conducted to assess the effects of degraded supply voltage and long cable lengths. This review identified instances where the voltage drops associated with these conditions could adversely affect the operation of plant equipment. Components in the following systems are affected:

P47: Control Complex Chilled Water
M32: Emergency Service Water Pump House Ventilation
M43: Diesel Generator Building Ventilation

The other systems originally identified as having potentially degraded operation due to excessive voltage drop have been evaluated and found acceptable. This evaluation considered either the use of the manufacturer's test data, a component specific calculation, or a functional test of the equipment to demonstrate operability under degraded voltage conditions.

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Analysis of Safety Implications

This deficiency could prevent or delay the start of the affected systems if a LOCA occurs when offsite power is in a degraded voltage condition.

Corrective Action

Design changes (ECN-28522-86-2280 and associated cable pull slips) are being initiated to increase the size of the cables to the affected components in order to prevent excessive voltage drops.

If you have any questions, please call.

Sincerely,

Murray R Edelman

Murray R. Edelman
Vice President
Nuclear Group

MRE:pab

cc: Mr. J. A. Grobe
USNRC, Site Office (SBB50)

Mr. D. E. Keating
USNRC, Site Office (SBB50)

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