



# THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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MURRAY R. EDELMAN

VICE PRESIDENT  
NUCLEAR

December 22, 1983

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  
Standby Diesel Generators DSRV 16  
Potential Defect Concerning IEEE  
383 Failure in Certain Class 1E  
Circuits [RDC 63(82)]

Dear Mr. Keppler:

This letter serves as our final report pursuant to 10CFR50.55(e) concerning the potential defect associated with the IEEE 383 failure in certain Class 1E circuit wiring in the standby diesel generator system supplied by Transamerica Delaval, Inc. (TDI). Initial notification that this problem was being evaluated by The Cleveland Electric Illuminating Company (CEI) was made to your office on November 23, 1982, by Mr. E. Riley of CEI. Previously submitted correspondence on this subject was transmitted September 27, 1983; March 30, 1983; and December 22, 1982.

This report contains a Description of the Potential Deficiency, an Analysis of Safety Implications and the Corrective Action Taken.

## Description of Potential Deficiency

Transamerica Delaval, Inc. notified CEI that commercial grade wire had been used as Class 1E cable in certain engine and panel circuits. This cable had failed the IEEE 383 Insulation Flame Test. The potential problem with the electrical cables is that the manufacturer's temperature rating for the cable insulation may be exceeded during operation of the diesel generator.

## Analysis of Safety Implications

There are two types of cable in question. The first of which is the shielded cable which runs from the magnetic pickups to the engine junction boxes. This cable is rated for 80°C. The expected operating temperature of the cable would exceed the manufacturer's rating when the ambient temperature is greater than 129°F. Failure of these cables could prevent the closing of the diesel generator output breaker. The Perry Nuclear Power Plant diesel generator has an ambient temperature lower than 125°F.

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The second cable is the multi-conductor cable which runs from the engine terminal box to the Woodward Governor Actuator. This cable is rated for 75°C. If the ambient temperature exceeds 98.5°F, the rated insulation temperature would be exceeded. Failure of this cable would result in the governor operating as a hydraulic speed sensing governor. Operation in this manner would allow the engine to run and carry load, but would provide a slightly slower response to load change or load pick-up. This situation would exist for the Perry Nuclear Power Plant since the diesel generator has an ambient temperature higher than 98.5°F.

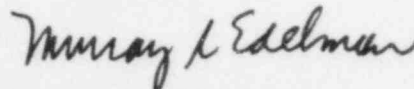
Corrective Action Taken

Transamerica Delaval sent to Perry Nuclear Power Plant instructions for replacing both potentially defective cable. Replacement parts for the cable had already been ordered prior to receipt of the instructions and have since been shipped to Perry Nuclear Power Plant.

At present, installation of the replacement cables is being directed by the Nuclear Construction Engineering Section of the Project Organization. Installation is scheduled to be completed by January 31, 1984.

Please call if there are any additional questions.

Sincerely,



Murray R. Edelman  
Vice President  
Nuclear Group

MRE:pab

cc: Mr. M. L. Gildner  
NRC Site Office

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