



# THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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MURRAY R. EDELMAN  
VICE PRESIDENT  
CLEAR

April 24, 1984

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  
Potential Defect in Two Piston  
Skirt Castings Supplied by  
Transamerica Delaval [RDC 101(84)]

Dear Mr. Keppler:

This letter serves as the final report pursuant to 10CFR50.55(e) concerning a potential problem with the piston skirts for the diesel engines supplied by Transamerica Delaval, Inc. Mr. P. R. Pelke of your office was first notified on March 30, 1984, by Mr. P. P. Martin of The Cleveland Electric Illuminating Company (CEI) that this matter was being evaluated for applicability to the Perry Nuclear Power Plant (PNPP).

This report contains a description of the deficiency, an analysis of the safety implication, and corrective action to be implemented.

## Description of Deficiency

The potential deficiency is associated with heat treating of piston skirt castings. Fan cooling may have been utilized resulting in residual stress which could cause cracking of the piston skirt during operation. The pistons currently installed in the PNPP diesels are not affected by this concern, however, two spare pistons at PNPP have been identified as potentially defective due to improper heat treating.

## Analysis of Safety Implication

Had the spare pistons been installed, the combination of the residual stress caused by the heat treating and the routine operating stress could potentially cause cracking of the piston skirt. A cracked piston skirt could result in engine failure.

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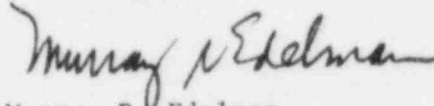
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Corrective Action

The two spare pistons identified at PNPP will be returned to the manufacturer. Transamerica Delaval will inspect, stress relieve if necessary, and return the pistons or replace them with new pistons which have been properly heat treated. Corrective action will be accomplished upon our receipt of new or corrected pistons and is anticipated by October 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

Director  
Office of Inspection and Enforcement  
U.S. Nuclear Regulatory Commission  
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