Wayne H. Jens
Vice President
Nuclear Operations

Detroit Edison

Fermi-2
6400 North Dixie Highway
Newport, Michigan 48166
(313) 586-4150

DMB

August 8, 1984
EF2-69655

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

Dear Mr. Keppler:

Reference: (1) Fermi 2
NRC Docket No. 50-341

(2) Letter, D. A. Wells to J. G. Keppler, dated May 27, 1983, EF2-63505

Subject: Final Report of 10CFR50.55(e) Item 94 "Loose Pole Piece Wedges on Four Emergency Disesel Generators"

This is Detroit Edison's final report concerning loose pole piece wedges on four emergency diesel generators. This item was originally reported as a potential 10 CFR50.55(e) deficiency on April 29, 1983, and was subsequently documented in Reference 2.

Description of Deficiency

During initial operation, Emergency Diesel Generator #14 exhibited excessive vibration and was shut down. Inspection revealed that one of the generator's salient poles had shifted in the axial direction. The dovetail of the pole projected about 3/4" beyond the end of the dovetail slot in the rotor. The tapered wedges used to lock the dovetail into the slot were loose and could not be tightened. Further inspection of this generator and the three other diesel generators revealed thirteen additional loose wedge pairs which could not be tightened.

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The manufacturer, Beloit Power Systems Division of Litton Industries, identified two probable causes for the loose pole piece dovetail wedges:

1. The wedge material was too soft for the application.

2. The wedges were too short to effectively lock the pole pieces in place.

The Beloit Power Systems Division of Litton Industries notified Detroit Edison on June 13, 1983 that they had filed this deficiency in accordance with 10CFR21.

Analysis of Safety Implications

If the loose pole piece dovetail wedges had gone undetected, this condition could have rendered one or more of the Emergency Diesel Generators inoperable.

Corrective Action

The dovetail wedges on all four Emergency Diesel Generators were replaced with wedges made from a harder material. The new wedges are longer which permits them to be driven farther into the dovetail slot for a tighter fit. The installation was performed under the direction of the manufacturer's representative.

After the installation of the new wedges, an overspeed trip was performed on each Emergency Diesel Generator. All wedges were checked for slippage and were found acceptable.

Dovetail wedge position verification is now part of the preventive maintenance program (6 month cycle) for these generators.

This is Detroit Edison's final report on this item. If you have questions concerning this matter, please contact Mr. Lewis P. Bregni, (313) 586-5083.

Sincerely,

Wayne H. Jens

cc: Mr. P. M. Byron
Mr. R. C. DeYoung
Mr. R. C. Knop