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August 27, 1984
EF2-69662

Mr. James G. Keppler
Regional Administrator
U. S. Nuclear Regulatory Commission
Region III
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,
August 30, 1982, EF2-59390
- (3) Letter, D. A. Wells to J. G. Keppler,
December 28, 1982, EF2-61525

Subject: Final Report of 10CFR50.55(e) Item 76
"Limitorque Limit Switch Rotor Failures"

This is Detroit Edison's final report concerning Limitorque limit switch rotor failures. Item 76 was originally reported as a potential deficiency on July 31, 1982, and subsequently documented in References (2) and (3).

Description of Deficiency

While performing standard maintenance procedures on motor operated valves, maintenance personnel discovered sixteen cracked limit switch rotors in QA Level I Limitorque motor operators. The cracks appear to have originated at the split pin that secures the limit switch rotor to the gear box shaft.

The rotor makes and breaks the contacts for the limit switches. The limit switch deenergizes the operator when the valve is in its open or closed position, depending on the direction of valve stem travel.

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Analysis of Safety Implications

Failure of the rotor could result in the motor continuing to run until the motor fails. Valves in safety related systems would remain either open or closed, depending on the direction of valve stem travel. The motor operators could fail to perform their intended safety function.

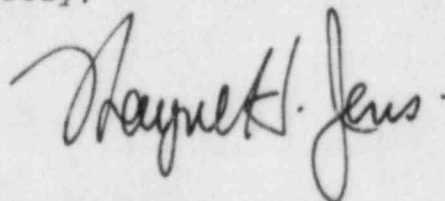
Corrective Action

The following actions were taken to correct this deficiency and prevent recurrence:

- o An inspection of the QA Level I operators was made and the results documented in NCR 83-280 for operators inside primary containment and NCR 83-283 for operators outside primary containment.
- o Field Modification Request (FMR) #S-5190 was written to require replacement of the limit switch assemblies on Limitorque operators inside the primary containment. FMR #S-5717 was written to replace the defective limit switch assemblies identified in the inspection on operators outside the primary containment.
- o To prevent the possibility of damage due to mishandling or improper installation of the split pin, the entire limit switch assembly, not just the rotor, was replaced as a unit.
- o Procedure CA10.000.006 requires a final inspection of the Limitorque limit switch rotors by Startup personnel after refurbishment. In addition, ongoing startup activities, including CA10 and preoperational testing have not identified any more Limitorque limit switch rotor failures.

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,



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