METROPOLITAN EDISON COMPANY SUBSIDIARY OF GENERAL PUBLIC UTILITIES CORPORATION

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March 31, 1977
GQL 0434

Mr. J. P. O'Reilly Director
U.S. Nuclear Regulatory Commission
Office of Inspection & Enforcement
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Sir:

Three Mile Island Nuclear Station Unit 2 (TMI-2)
License No. CPPR-66
Docket No. 50-320
Emergency Diesel Generators

On March 4, 1977, Mr. L. Narrow of your office was verbally notified of a situation which Metropolitan Edison Company considered to be reportable in accordance with the requirements of 10CFR50.55(e). This letter constitutes the required thirty-day follow-up letter.

Description

Fairbanks Morse Engine Division of Colt Industries, the manufacturer of the TMI-2 Diesel Generators, advised us that, based on service reports on similar units in operation, some components are not providing the intended service life. Specifically:

1. Vertical Drive Hubs - It is possible that the hubs do not meet the manufacturer's appropriate material standard and should be replaced to prevent possible cracking failures.

2. Fuel Header Crossover Connection - A new, heavy duty, high alloy pipe connector and clamp for each side of the engine should be provided to prevent cracking failure of the connectors.

3. Cam Shaft and Cam Followers - Improved cam roller design with radiused edges, depth hardening and concentricity controls should be installed to prevent Cam follower fractures and/or cam distress on the cam shaft in order to achieve normal part life.

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Analysis of Safety Implications

Of the three component problems described, only the failed fuel header cross-over connection failure caused complete loss of diesel functions at another facility. The hub failure caused no loss of functions and the cam follower failure caused slight loss of power. The manufacturer has indicated that each incident occurred only once and that the probability of additional failures (had the components not been corrected) is very low considering that some 25 diesels of the same design have been in operation for 1 to 7 years.

In the unlikely event that one diesel was lost due to a component failure at TMI-2, the remaining 100% redundant diesel would take over vital functions. For this reason, there would have been no adverse effect on the health or safety of the public or the plant staff.

Corrective Action

The following actions are being planned to correct these deficiencies:

1. Fairbanks Morse will perform a microscopic examination of the vertical drive hubs. Those found to be sub-standard will be replaced.

2. Fuel Header Crossover Connections will be replaced by Fairbanks Morse with the new heavy duty, high alloy pipe connector and clamp on each side of each engine.

3. New improved cam followers will be installed by Fairbanks Morse. If inspection shows evidence of cam distress on the cam shaft, it too will be replaced.

4. A four-hour load test will be performed on the diesels after repairs are made and a final inspection will be conducted.

All corrective actions will be completed prior to fuel load presently scheduled for 10/15/77. Inspection, repair and test documentation will be available at the site for review.

Very truly yours,

R. C. Arnold
Vice President

cc: Dr. Ernst Volgenau, Director
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555