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Nuclear Operations

June 12, 1996
NRC-96-0066

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

References: 1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

2) Detroit Edison Letter to NRC, "Proposed Technical Specification Change (License Amendment) - Emergency Diesel Generator Action Statements, Surveillance Requirements and Report," NRC-95-0124, dated November 22, 1995

3) Detroit Edison Letter to NRC, "Response to Questions on Proposed Emergency Diesel Generator Technical Specification Change," NRC-96-0008, dated February 19, 1996

4) NRC Letter to Detroit Edison, "Technical Specification Change Request - Emergency Diesel Generator Allowed Outage Time Extension (TAC No. M94171)," dated March 22, 1996

5) Detroit Edison Letter to NRC, "Response to NRC Letter on Emergency Diesel Generator Allowed Outage Time Extension," NRC-96-0041, dated April 19, 1996

Subject: Response to Questions on Combustion Turbine Generator (CTG) 11 Unit Number 1 Reliability and System Refurbishment

This letter provides documentation of the Detroit Edison responses to questions asked by Messrs. D. Pickett and P. King about the Alternate AC power (AAC) system (i.e., CTG 11-1) reliability and system refurbishment during a May 30, 1996 conference call. The questions pertain to Detroit Edison's request to increase the

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allowed out-of service time for each onsite AC electric power source or Emergency Diesel Generator (EDG) division (Reference 2).

Since August 1995, CTG 11-1 reliability for the last 20 starts has been 95%. This reliability number is based on the total number of start attempts; i.e. starts for system load considerations and surveillance tests. The method used to calculate this reliability would have included any failures occurring during the period of time that the CTG was running loaded after completing a successful start.

Total reliability for the most recent 50 starts (system and surveillance tests) is 88%. If only surveillance test starts are considered, the reliability for the last 50 starts would be 94%. Prior to August 1995 Detroit Edison did not maintain records of all CTG starts for system load, therefore, longer term reliability calculations, e.g. for more than the last 50 starts, are based on surveillance test starts only. The most recent 140 surveillance starts included 5 test failures resulting in a calculated reliability of 96.4 %.

NUMARC 87-00 requires a root cause of failures. The root cause of the CTG 11-1 surveillance test and non-surveillance start failures was attributed to failure of components due to aging. As discussed in the May 30, 1996 phone call, Detroit Edison is in the process of refurbishing CTG 11-1 with the objective of improving long term reliability. The refurbishment started in April and is expected to be completed by July, 1996.

The refurbishment includes the replacement or addition of the following components:

1) General Electric (GE) Mark V digital electronic control system

2) GE model EX2000 digital static excitation unit

3) Larger off base cooling water skid

4) Dedicated battery system

5) Generator output breaker

6) Hydraulic control system which replaces the control air system

7) Replace control wiring

8) Control house dedicated to CTG 11-1 with a motor control system

9) Turbine compartment ventilation system

Additionally, a major overhaul and test/inspection of the turbine, generator and accessories will be completed by July, 1996. Detroit Edison and General Electric expect total reliability of the AAC to increase following the refurbishment and overhaul of the CTG 11-1.

If you have any questions, please contact Mr. Joseph Pendergast at (313) 586-1682.

Sincerely,

Robert McKeon

cc: M. J. Jordan
H. J. Miller
D. V. Pickett
A. Vegel