

Robert S. Lenart
Plant Manager

**Detroit
Edison**

Fermi-2
6400 North Dixie Highway
Newport, Michigan 48166
(313) 586-5201

PRIORITY ROUTING	
First	Second
DRP <i>DRP</i>	DRP
DRS <i>DRS</i>	DRS
DRSS <i>DRSS</i>	DRSS
DRMA <i>DRMA</i>	DRMA
	DRM
	DRW

FILE *FILE*

Nuclear
Operations

January 13, 1986
NP860015

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

Dear Mr. Keppler:

Reference: Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

Subject: Diesel Generator Start Failure

Please find enclosed our report on the start failure of Emergency Diesel Generator (EDG) 13 on December 14, 1985. This report is submitted to you in accordance with Fermi 2 Technical Specifications 4.8.1.1.3 and 6.9.2.

If you have any questions regarding this matter, please call Mr. L. P. Bregni, Compliance Engineer, at (313) 586-5311.

Sincerely,

Robert

R. S. Lenart

cc: P. M. Byron
M. David Lynch
G. C. Wright
U.S. NRC Document Control Desk
Washington, D.C. 20555

8601280713 860113
PDR ADCK 05000341
S PDR

JAN 16 1986

IEOI

Enclosure 1

Diesel Generator Start Failure

1. Emergency Diesel Generator Involved:

EDG 13

2. Identification of Failure:

Failure date: December 14, 1985

Description: This was the first start failure of EDG 13 since the issuance of the Fermi 2 operating license. At the time of this start failure, there had been 16 previous valid test starts since the OL was issued. The December 14, 1985 start failure is considered an "invalid test" start failure under Section C.2.e.(2) of Regulatory Guide 1.108, because the slow start method used in this event is bypassed during emergency starts when the EDG is in "standby".

3. Cause of Failure:

EDG 13 tripped on low lube oil pressure during a slow start of the engine at 400 rpm (normal running speed is 900 rpm). EDG 13 had been shut down only 1 hour and 54 minutes earlier, following a previous engine run. As a result, the lube oil temperature was 148 degrees F at the time of the subsequent attempted start. Normally, the EDG lube oil temperature is between approximately 132 - 138 degrees F when the EDG is in "standby".

The trip resulted from starting the engine and idling at 400 rpm with lube oil significantly warmer than normal. Because lube oil pump speed is tied to engine speed, the slow idle speed, combined with the warmer oil, led to significantly lower lube oil pressure. This resulted in a low lube oil pressure trip. At 900 rpm, the speed of the EDG under emergency start conditions, lube oil pressure would have exceeded the low pressure trip setpoint, even at the higher oil temperature observed in the December 14, 1985 start failure.

Mr. James G. Keppler
January 13, 1986
NP860015
Page 3

Enclosure 1 (continued)

Diesel Generator Start Failure

4. Corrective Measures Taken:

A modification allowing slow start capability of EDG 13 was installed in November 1985. The EDG operating procedure was revised to address the slow start modifications. With the concurrence of the EDG vendor, the procedure stated that the EDG could be slow started at 400 rpm with lube oil temperature below 150 degrees F. This EDG trip revealed that the lube oil temperature must be less than 140 degrees F to slow start the EDG at 400 rpm. To prevent recurrence of this start failure, Detroit Edison has revised all procedures which require a slow start of EDGs 11, 12, 13, and 14 to include a caution not to slow start the EDGs at 400 rpm if lube oil temperature is above 140 degrees F.

5. Length of Time Unit Unavailable:

EDG 13 was out of service for special testing at the time of this start failure. Hence, EDG availability was not lost.

6. Current Surveillance Test Interval:

The current surveillance test interval is once per 31 days.

7. Verification of Conformance of Test Interval:

This surveillance test interval is in conformance with Regulatory Position C.2.d of U.S. NRC Regulatory Guide 1.108 and in conformance with Fermi 2 Technical Specification Table 4.8.1.1.2-1.