

**LICENSEE EVENT REPORT (LER)**

FACILITY NAME (1) Three Mile Island Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 3 2 0 1										PAGE (3) OF 0 3																									
TITLE (4) Inoperability of Emergency Diesel Generator DF-X-1B Due to a Failed Governor and a Defective Solenoid																																													
EVENT DATE (5)						LER NUMBER (6)						REPORT DATE (7)						OTHER FACILITIES INVOLVED (8)																											
MONTH		DAY		YEAR		YEAR		SEQUENTIAL NUMBER		REVISION NUMBER		MONTH		DAY		YEAR		FACILITY NAMES										DOCKET NUMBER(S)																	
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1		2		0		8		5		8		6		0		0		1		0		0		0		1		1		6		8		6		0 5 0 0 0									
OPERATING MODE (9)						THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																																							
N						20.402(b)						20.406(c)						50.73(a)(2)(iv)						73.71(b)																					
POWER LEVEL (10)						0 0 0						20.406(a)(1)(i)						50.38(c)(1)						50.73(a)(2)(v)						73.71(c)															
						20.406(a)(1)(ii)						50.38(c)(2)						50.73(a)(2)(vii)						OTHER (Specify in Abstract below and in Text, NRC Form 365A)																					
						20.406(a)(1)(iii)						X 50.73(a)(2)(i)						50.73(a)(2)(viii)(A)																											
						20.406(a)(1)(iv)						50.73(a)(2)(ii)						50.73(a)(2)(viii)(B)																											
						20.406(a)(1)(v)						50.73(a)(2)(iii)						50.73(a)(2)(ix)																											
LICENSEE CONTACT FOR THIS LER (12)																																													
NAME																				TELEPHONE NUMBER																									
Christopher J. Dell, TMI-2 Licensing Technical Analyst																				7 1 7 9 4 8 - 8 2 4 4																									
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																													
CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO NFRDS				CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO NFRDS																									
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SUPPLEMENTAL REPORT EXPECTED (14)																																													
X YES (If yes, complete EXPECTED SUBMISSION DATE)																				NO																									
																				EXPECTED SUBMISSION DATE (15)																									
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																																													

At 2050 hours on December 13, 1985, the annual preventive maintenance for Emergency Diesel Generator DF-X-1B commenced. On December 20, 1985, while performing the required demonstration of engine operability, it was determined that there was no remote speed control. Troubleshooting eventually identified the governor as being defective. A replacement governor was obtained and installed. Retesting indicated that the remote speed control problem was corrected, but there was no shutdown capability. Further troubleshooting discovered a defective solenoid in the replacement governor. A new solenoid was obtained and installed. Engine operability was successfully demonstrated and the engine was returned to service at 1709 hours on December 21, 1985. Thus, Emergency Diesel Generator DF-X-1B was out-of-service for more than seven (7) days, exceeding the timeclock of the Action Statement of Technical Specification 3.8.1.1. The event is reportable pursuant to 10 CFR 50.73(i)(2)(i)(B). The root cause of this event is not known at this time. The governor and solenoid will be returned to the manufacturer for analysis. A supplemental report will be submitted to report the results of the analysis.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Three Mile Island Unit 2	0 5 0 0 0 3 2 0	8 6	— 0 0 1	— 0 0 0	0 2	OF	0 3

TEXT (If more space is required, use additional NRC Form 366A's) (17)

I. PLANT OPERATING CONDITIONS BEFORE THE EVENT

The TMI-2 facility was in a long-term cold shutdown state; the defueling evolution is in progress. The reactor decay heat was being removed via loss to ambient. Throughout this event there was no effect on the Reactor Coolant System or the core.

II. STATUS OF STRUCTURES, COMPONENTS, OR SYSTEMS THAT WERE INOPERABLE AT THE START OF THE EVENT AND THAT CONTRIBUTED TO THE EVENT

At the time of the event, Emergency Diesel Generator DF-X-1B (IEEE Code - EK) was out-of-service due to the performance of the annual preventive maintenance.

III. EVENT DESCRIPTION

At 2050 hours on December 13, 1985, the annual preventive maintenance of TMI-2 Emergency Diesel Generator, DF-X-1B, commenced in accordance with TMI-2 Preventive Maintenance Procedure 4220-PMR-3860.01, "Diesel Generator Inspection." On December 20, 1985, while performing the required demonstration of engine operability at the completion of the preventive maintenance, it was determined that there was no remote speed control, i.e., the speed of the diesel generator could not be regulated by the Control Room. Troubleshooting eventually identified the governor (IEEE Code-65) as being defective. A replacement governor was obtained and installed. Retesting indicated that the remote speed control problem was corrected, but there was no shutdown capability. Further troubleshooting discovered a defective solenoid (IEEE Code-SOL) in the replacement governor. A new solenoid was obtained and installed. Engine operability was successfully demonstrated and the engine was returned to service at 1709 hours on December 21, 1985.

Due to the timing of the governor and solenoid failure, i.e., at the completion of the annual preventive maintenance, Emergency Diesel Generator DF-X-1B could not be restored to service within the seven (7) day timeframe permissible under the Action Statement of Technical Specification 3.8.1.1. The Action Statement was exceeded by twenty (20) hours and nineteen (19) minutes. Therefore, this event is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B).

IV. ROOT CAUSE OF THE EVENT

The root cause of the governor failure and the subsequent defective solenoid has not been determined. A supplemental report will be submitted when this information becomes available.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)  Three Mile Island Unit 2	DOCKET NUMBER (2)  0 5 0 0 0 3 2 0	LER NUMBER (6)			PAGE (3)		
		YEAR 8 6	SEQUENTIAL NUMBER 0 0 1	REVISION NUMBER 0 0			
					0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 388A's) (17)

V. CORRECTIVE ACTIONS

Short Term - The failed governor and subsequent defective solenoid were replaced. Engine operability was successfully demonstrated and the diesel was returned to service at 1709 hours on December 21, 1985.

Long Term - Both the governor and the solenoid will be returned to the manufacturer for analysis. GPU Nuclear will interact with the manufacturer on this event to determine if additional corrective actions are necessary.

VI. COMPONENT FAILURE DATA

Part Type	Part Designator	Manufacturer
Governor	D-8240-089	Woodward
Solenoid	5407-049	Woodward

VII. AUTOMATIC OR MANUALLY INITIATED SAFETY SYSTEM RESPONSES

N/A

VIII. ASSESSMENT OF THE SAFETY CONSEQUENCES AND IMPLICATIONS OF THE EVENT

During the period the Emergency Diesel Generator, DF-X-1B, was inoperable, Emergency Diesel Generator, DF-X-1A, was in service. The operability of DF-X-1A was demonstrated by performing the surveillance requirements of Recovery Operations Plan Section 4.8.1.1.1 and 4.8.1.1.2.a.4 in accordance with the Technical Specification Testing Frequency Matrix of Table 3.8-1. During the period DF-X-1B was inoperable, offsite AC power was available and DF-X-1A could have performed the same function as DF-X-1B. No events requiring use of the Emergency Diesel Generators occurred during this period; therefore, this event had no effect on the health and safety of the public.



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4410-86-L-0016  
Document ID 0386A

January 16, 1986

US Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

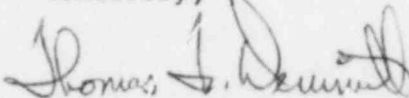
Dear Sir:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)  
Operating License No. DPR-73  
Docket No. 50-320  
Licensee Event Report 86-01

Attached is Licensee Event Report 86-01 concerning the inoperability of Emergency Diesel Generator DF-X-1B on December 20, 1985.

This event is considered reportable pursuant to Title 10 of the Code of Federal Regulations, Section 50.73(a)(2)(i)(B).

Sincerely,

  
F. R. Standerfer  
Vice President/Director, TMI-2

FRS/CJD/eml

Attachments

cc: Regional Administrator - Office of I & E, Dr. T. E. Murley  
Director - TMI-2 Cleanup Project Directorate, Dr. W. D. Travers

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