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NRC Form 306 (9-83) U.S. NUCLEAR REGULATORY COMMISSION  
 APPROVED OMB NO. 3150-0104 EXPIRES: 8/31/85  
**LICENSEE EVENT REPORT (LER) BY W**

196342

FACILITY NAME (1) Three Mile Island Unit 2 DOCKET NUMBER (2) 0500031210 PAGE (3) 1 OF 04

TITLE (4) Inoperable Status of the Emergency Diesel Generator Fire Suppression Systems

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)
08	01	85	85	008		08	30	85			05000
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)											

12-16-85 Teresa

OPERATING MODE (9)	20.402(b)	20.406(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	20.406(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
	20.406(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	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 John C. Auger, TMI-2 Licensing Engineer TELEPHONE NUMBER 717 948-8244

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14) YES (if yes, complete EXPECTED SUBMISSION DATE) X NO EXPECTED SUBMISSION DATE (15)

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On August 1, 1985, at 1255 hours, it was discovered that the TMI-2 fire system valve FS-V-137 was closed. This valve isolates (and renders inoperable) the area fire suppression deluge/sprinkler systems for the TMI-2 Emergency Diesel Generator (EDG) air intake area, fuel oil tank areas and generator rooms. The valve had been closed since July 17, 1985. These area fire suppression deluge/sprinkler systems are required to be operable pursuant to Technical Specification (T.S.) Limiting Condition for Operation (LCO) 3.7.10.2. During the period that this valve was closed, the unit failed to comply with the Action Statement of T.S. LCU 3.7.10.2.

The cause of this event has been determined to be a personnel error on the part of the Shift Foreman who authorized the closure of FS-V-137 without recognizing that this would isolate the area fire suppression deluge/sprinkler systems.

The failure to initiate a one hour firewatch, provide backup fire suppression equipment and return the area fire suppression deluge/sprinkler system to service within fourteen (14) days resulted in violation of the Action Statement of T.S. LCO 3.7.10.2. Failure to comply with the Action Statement results in this event being reportable to the NRC pursuant to 10 CFR 50.73(a)(2)(i)(B).

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		YEAR 8   5	SEQUENTIAL NUMBER -   0   0   8	REVISION NUMBER -   0   0	0   2	OF	0   4

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 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

N/A

III. EVENT DESCRIPTION

On June 10, 1985, a TMI Unit 1 Switching and Tagging Application was issued to provide isolation to fire service systems (IEEE Code-KP) in order to identify and repair a piping leak in Unit 1. This tagging application initially applied to Unit 1 valves only. During the repair operation, it was discovered that a fire system yardpost indicating valve, FS-V-234, was damaged and would require repairs. In order to isolate this damaged valve, the tagging application was modified to include the closing of fire system valve FS-V-137. The Unit 2 Shift Foreman responsible for switching and tagging in Unit 2 was contacted for his concurrence of the proposed addition of FS-V-137. The Unit 2 Shift Foreman reviewed Burns and Roe drawing M233, Revision 2, to determine if a fire system impairment would be created by the addition of FS-V-137. Drawing M233, Revision 2, is an operational schematic for the Fire Protection Yard Unit 1 and Unit 2. The Unit 2 Shift Foreman did not identify any impairment during his review and, therefore, gave his concurrence for the addition of FS-V-137 to the tagging application.

On July 17, 1985, at 1000 hours, fire system valve FS-V-137 was closed with the concurrence of the Unit 2 Shift Foreman. The closing of FS-V-137 resulted in the isolation of the area fire suppression deluge/sprinkler systems for the TMI Unit 2 EDG (IEEE Code-EK) air intake area, fuel oil tank areas and generator rooms. This isolation resulted in those area fire suppression deluge/sprinkler systems being inoperable. T.S. LCO 3.7.10.2, items a, b, and g, require that these area fire suppression deluge/sprinkler systems be operable at all times. With these systems inoperable, the unit was placed in the Action Statement of T.S. LCO 3.7.10.2. When a system required operable by T.S. LCO 3.7.10.2 is inoperable, the Action Statement requires that a

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

one hour fire watch be established, that backup fire suppression equipment be provided, and that the inoperable system be returned to service within fourteen (14) days. However, the Unit 2 Shift Foreman did not recognize that the closing of valve FS-V-137 placed the unit into the Action Statement of T.S. LCO 3.7.10.2 and, therefore, the Action Statement was not complied with. Failure to comply with the Action Statement of T.S. LCO 3.7.10.2 results in this event being reportable to the NRC pursuant to 10 CFR 50.73(a)(2)(i)(B).

IV. ROOT CAUSE OF THE EVENT

The reportability of this event is based on the failure to comply with the Action Statement of T.S. LCO 3.7.10.2.

The root cause of this event was the failure on the part of the Unit 2 Shift Foreman to recognize that the closing of fire system valve FS-V-137 would isolate the fire service water to the Unit 2 EDG Building. The Unit 2 Shift Foreman's authorization to tag closed FS-V-137 was based on his review of the Burns and Roe operational schematic M233, Revision 2. This schematic does not depict the fire suppression deluge/sprinkler system details within the buildings, rather it depicts only the fire system main supply headers outside the buildings. Therefore, this schematic did not have sufficient detail to enable the Unit 2 Shift Foreman to identify which portions of the building deluge/sprinkler systems were being isolated.

V. CORRECTIVE ACTIONS PLANNED

Immediate

Upon discovery of the area fire suppression systems being isolated, an hourly firewatch was established in the effected areas and backup fire suppression equipment was supplied. The area fire suppression systems were restored to operable status at 0130 hours on August 2, 1985.

Long Term

The Site Operations Department has been tasked to reinforce the practice of using updated plant flow diagrams when determining possible plant impairment.

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

VI. COMPONENT FAILURE DATA

N/A

VII. AUTOMATIC OR MANUALLY INITIATED SAFETY SYSTEM RESPONSES

N/A

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

A review of the safety consequences and implications of the isolation of area fire suppression systems was performed. This event effected three separate fire areas in the Unit 2 EDG Building. All three areas contain fire detection equipment and are provided with manual fire fighting equipment in the form of portable chemical and carbon dioxide extinguishers. The capability to detect and mitigate a fire in any one of these areas existed throughout this event (i.e., activation of fire detection alarms and the use of manual fire fighting equipment). The design basis fires for these areas assume all equipment in the areas will be lost. Since the EDG's provide backup capability for the plant in the event of a loss of offsite power, availability of the primary source (offsite power) was not compromised. The capability to maintain the reactor in a safe cold shutdown condition existed throughout the event via loss to ambient or makeup capability from the Borated Water Storage Tank.



**GPU Nuclear Corporation**  
Post Office Box 480  
Route 441 South  
Middletown, Pennsylvania 17057-0191  
717 944-7621  
TELEX 84-2386  
Writer's Direct Dial Number:

(717) 948-8461

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August 30, 1985

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 85-08

Attached is Licensee Event Report 85-08 concerning the inoperable status of the Emergency Diesel Generator Fire Suppression Systems. This condition was identified on August 1, 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/JCA/eml

Attachments

cc: Regional Administrator - Office of I & E, Dr. T. E. Murley  
Program Director - TMI Program Office, Dr. B. J. Snyder  
Deputy Program Director - TMI Program Office, Dr. W. D. Travers

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