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NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION  
APPROVED OMB NO. 3150-0104  
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

BFW

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FACILITY NAME (1) Three Mile Island Unit 2						DOCKET NUMBER (2) 0 5 0 0 0 3 1 2 1 0				PAGE (3) 1 OF 0 1 4	
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TITLE (4)  
Low Fuel Handling Building Exhaust Flowrate

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)
1	0	18	8	4		8	4				0 5 0 0 0
											0 5 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

OPERATING MODE (9) N	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 0 1 0 1 0	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
	20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
	20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

3885 Jereza

LICENSEE CONTACT FOR THIS LER (12)

NAME Russell D. Wells, TMI-2 Licensing Engineer	TELEPHONE NUMBER AREA CODE: 7 1 7 NUMBER: 9 4 8 -- 8 2 4 4
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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
X	VIF	FIA N	G I O 3 1 9	N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

At 1630 hours on October 18, 1984, a Control Room Operator (CRO) observed that the Fuel Handling Building (FHB) Ventilation System Exhaust Flowrate, with Exhaust Fans AH-E-10 "C" and "D" operating, indicated 33,000 cfm which was below the minimum limit of 36,000 cfm required by Technical Specification 3.9.12.1. It was determined that this condition had existed since approximately 1045 hours on the same day. During this period, processing of liquid radioactive wastes occurred in the FHB which resulted in the unit being in non-compliance with the Action Statement of Technical Specification 3.9.12.1. Therefore, this event is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B). The CRO immediately suspended all operations involving movement of liquid and radioactive gaseous radioactive wastes in the FHB. At 2010 hours on October 18, 1984, the "C" and "D" exhaust fans were secured, the "A" and "B" exhaust fans were started, and the exhaust flowrate returned to normal. The cause of the low FHB exhaust flowrate was due to a drive belt failure as a result of normal use.

This LER is similar in nature to LER 84-01.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		0	1	9	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 is in a long-term cold shutdown state. The reactor decay heat is 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

At 1630 hours on October 18, 1984, as required by the shift turnover, a Control Room Operator (CRO) observed that the Fuel Handling Building (FHB) Ventilation System Exhaust Flowrate (IEEE Code - VF), with Exhaust Fans AH-E-10 C and D operating, indicated 33,000 cfm which is less than the minimum flowrate of 36,000 cfm required by Technical Specification 3.9.12.1. A review of the associated flowchart recorder revealed that the condition had existed since approximately 1045 hours on the same day at which time the FHB exhaust flowrate decreased from approximately 37,500 cfm to 33,000 cfm. During this period, two (2) radioactive liquid movements in the FHB occurred. These movements included the elution process from Makeup Demineralizer 1B to Neutralizer Tank WDL-T-8A and recirculation of the Neutralizer Tank. The latter movement was in progress at the time the CRO discovered the event. The CRO immediately suspended all operations involving movement of liquid and gaseous radioactive wastes and initiated an investigation to determine the cause of the event. However, the Action Statement of Technical Specification 3.9.12.1 requires that with the FHB Exhaust System inoperable due to flow requirements, either restore the flow to acceptable limits within four (4) hours or immediately suspend all operations involving movements of liquid and gaseous radioactive wastes in the FHB. Since the above requirements were not complied with, this event is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B).

Initial troubleshooting was unable to determine the cause of the low FHB exhaust flowrate. Therefore at 2010 hours on October 18, 1984, FHB Exhaust Fans AH-E-10 "C" and "D" were secured, FHB Exhaust Fans AH-E-10 "A" and "B" were started, and the FHB exhaust flowrate was returned to normal.

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

IV. ROOT CAUSE OF THE EVENT

A subsequent investigation by plant maintenance determined that the root cause of the low FHB exhaust flowrate was due to a failure of the drive belts on the FHB Exhaust "D" fan. The cause of the belt failures was apparently due to normal use and wear since the belt failure could not be attributed to any mechanical deficiencies. A contributing cause of this event was that the low FHB exhaust flowrate was not detected until after the four (4) hour timeclock allowed by the Technical Specification had expired. This was due to the fact that the exhaust flowrates for the Auxiliary and Fuel Handling Buildings were recorded only once per shift (i.e., every eight hours). The Auxiliary and Fuel Handling Building Exhaust Systems have "low-flow" alarms which are designed to trip the exhaust fans if a sufficient flowrate is not obtained during startup. However, in this event, the decrease in the FHB exhaust flow was not of a sufficient magnitude to activate the "low-flow" alarm.

V. CORRECTIVE ACTIONS PLANNED

Processing of liquid and gaseous radioactive wastes were immediately suspended upon detecting that the FHB exhaust flowrate was below the acceptable limits. At 2010 hours on October 18, 1984, the "C" and "D" FHB Exhaust Fans were secured, the "A" and "B" Exhaust Fans were started, and the FHB exhaust flowrate was returned to normal. Following replacement of the drive belts, the "D" fan was returned to service on November 8, 1984. In order to prevent similar occurrences of the above event, the monitoring frequency of the Auxiliary and Fuel Handling Building exhaust flowrates has been increased to once every four (4) hours. This corrective action will ensure that similar events will be detected and compliance achieved with the Action Statement requirements of the Technical Specification.

VI. COMPONENT FAILURE DATA

Drive belts for FHB Exhaust Fan AH-E-10 D  
Manufacturer - Gates Rubber Company

VII. AUTOMATIC OR MANUALLY INITIATED SAFETY SYSTEM RESPONSES

N/A

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

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

The safety implications of the event were that processing of liquid radioactive wastes occurred in the FHB while the exhaust flowrate was below the acceptable limits. However, the Control Room personnel would have been alerted to any potential radiological releases by the various radiological monitors located in the plant and, therefore, would have immediately secured the radiological processing.



**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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November 15, 1984

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 84-019

Attached is Licensee Event Report 84-019 concerning the below minimum Fuel Handling Building Ventilation System Exhaust Flowrate on October 18, 1984.

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/RDW/jep

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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