

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Three Mile Island Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3   2 0	PAGE (3) 1 OF 013
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TITLE (4)  
Inoperability of Emergency Diesel Generator DF-X-1A

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	1	8	4	0	1	8	0			0 5 0 0 0
1	0	1	8	4	0	1	8	0			0 5 0 0 0

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) 0 0 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.406(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)								

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME Russell D. Wells, TMI-2 Licensing Engineer		AREA CODE 7 1 7	7 4 8   - 8 2   4 4

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUF. TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUF. TURER	REPORTABLE TO NPRDS		
X	E I K S E I A I L	F I O I I O		N							

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO					

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

On October 12, 1984, as part of the annual preventive maintenance program for the Emergency Diesel Generators, a hydrostatic leakrate test was performed on Diesel Generator DF-X-1A. Water leakage of approximately 3-4 drops per minute between the cylinder liner and the water jacket was observed at the air intake section of the number 9 cylinder. This indicated that the leakage was due to a failure of the O-ring seal which separates the cylinder liner and the water jacket. Replacement of the entire cylinder assembly was required. As a result, the "A" Diesel Generator 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 "A" Diesel Generator was returned to service at 1240 hours on October 23, 1984. The cylinder assembly, including the failed O-ring, will be returned to the manufacturer.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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 4	SEQUENTIAL NUMBER  - 0 1 8	REVISION NUMBER  - 0 1	OF	
					0 2	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 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

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

III. EVENT DESCRIPTION

At 0615 hours on October 8, 1984, the annual preventive maintenance of TMI-2 Emergency Diesel Generator, DF-X-1A, commenced. Included in this maintenance is a 50 psi hydrostatic test of the closed portion of the diesel's cooling system. During the performance of the test of the "A" Diesel Generator on October 12, 1984, water leakage was observed at the air-intake section of the number 9 cylinder. A seepage of approximately 3-4 drops per minute was observed between the cylinder liner and water jacket. This indicated that the leakage was due to a failure of the O-ring seal which separates the cylinder liner and the water jacket. The liner, water jacket, and O-ring seal are furnished together as an assembly. Therefore, the failure of the O-ring seal necessitated replacement of the entire cylinder assembly. Due to the extensive efforts required to replace the entire cylinder assembly, the "A" Emergency Diesel Generator could not be restored to service within the 7-day timeframe permissible under the Action Statement of Technical Specification 3.8.1.1. Therefore, this event is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B).

Following the replacement of the cylinder assembly, a successful hydrostatic test was performed. At 1240 hours on October 23, 1984, Emergency Diesel Generator DF-X-1A was returned to service after satisfactory completion of the annual preventive maintenance. Subsequent to returning the "A" Diesel Generator to service, the annual preventive maintenance of Emergency Diesel Generator DF-X-1B was performed. During this maintenance, the "B" Diesel Generator's hydrostatic test was performed satisfactorily.

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		8 4	0 1 8	0 1	0 3	OF	0 3

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

Please note that the event date of this LER was October 12, 1984; however, since the preventive maintenance commenced on October 8, 1984, the reportability date of this LER is October 15, 1984, when the 7-day timeclock of the Technical Specification Action Statement expired.

IV. ROOT CAUSE OF THE EVENT

This event was discussed with the diesel's manufacturer, Fairbanks Morse. The manufacturer stated that cylinder liner to jacket "O"-ring seal leaks are not a chronic problem. However, in current liners, the "O"-ring material has been changed from Buna-N to a high temperature Viton material. The "O"-ring seal in this event was of the former material. The Viton material has been very successful in reducing seal damage due to overheating and overloads.

V. CORRECTIVE ACTIONS PLANNED

Short Term - The cylinder liner assembly was replaced and a hydrostatic test was performed satisfactorily.

Long Term - The cylinder liner assembly, containing the failed O-ring seal, will be returned to the manufacturer for inspection and resealing with the new Viton "O"-rings.

VI. COMPONENT FAILURE DATA

Fairbanks Morse Opposed Piston Engine, Model 3800TD8-1/8, O-ring between the cylinder liner and water jacket (part of cylinder liner assembly).

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 "A" Emergency Diesel Generator was inoperable, the "B" Emergency Diesel Generator, DF-X-1B, was in service and could have performed the same functions as the "A" Diesel Generator. Therefore, this event had no effect on the health and safety of the public.



**GPU Nuclear Corporation**

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4410-85-L-0044  
Document ID 0135A

February 27, 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  
Updated Licensee Event Report 84-018/1

Attached is updated Licensee Event Report 84-018/1 concerning the inoperability of Emergency Diesel Generator DF-X-1A on October 12, 1984. This event was originally reported on November 13, 1984.

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

Sincerely,

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

FRS/RDW/vjf

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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January 29, 1985

Florida Power Corporation  
ATTN: Mr. Walter S. Wilgus, Vice President  
Nuclear Operations  
P. O. Box 14042, M.A.C. H-2  
St. Petersburg, FL 33733

Gentlemen:

SUBJECT: CONFIRMATION OF ACTION - DOCKET NO. 50-302

This letter refers to my telephone conversation on January 28, 1985, with Mr. E. M. Howard, Director, Site Nuclear Operations, Crystal River Nuclear Plant, concerning control of examination records, recertification of license candidates, and audit of the Crystal River training program.

Based upon the matters discussed, it is our understanding that Florida Power Corporation will complete the following actions:

1. Recertify to the NRC that the operator and senior operator applicants examined by the NRC in December 1984, are qualified pursuant to 10 CFR 55.10(a)(6). This recertification will be based upon verification of the completion of all applicable hot license training and experience requirements; review and evaluation of all written and oral audit examinations; and resolution of all identified training deficiencies. Licenses for individuals who passed the NRC examinations will be withheld pending receipt of this recertification.
2. Conduct a quality assurance review of Crystal River operator training procedures and activities and meet with NRC in Region II to discuss the results of this review.

If your understanding of our discussion is different from that stated above, please inform this office promptly.

Sincerely,

(Original signed by PRBemis)

James P. O'Reilly  
Regional Administrator

CAL-50-302-85-02

cc: E. M. Howard, Director,  
Site Nuclear Operations  
P. F. McKee, Nuclear  
Plant Manager

bcc: (See Page 2)

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RII <i>BJ</i> BJones 1/29/85	RII <i>MP</i> MPuckett 1/29/85	<del>RII <i>JV</i> JVorse 1/29/85</del>
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