NRC Form 366
(9-83)

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

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Davis-Besse Unit 1	0 5 0 0 0 3 4 6	1 OF 0 3

TITLE (4)
Inoperable Diesel Fire Pump

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)
										0 5 0 0 0
1 0	1 1	8 5	8 5	0 2 0	0 0	1 1	1 0	8 5		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)			
POWER LEVEL (10) 0 1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
	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)	X OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	Special Report
	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)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Dean Siferd, Technical Support Engineer	AREA CODE 4 1 9 — 2 4 9 - 5 0 0 0

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	
D	K P	P	C 7 6 2	N							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

This is a special report pursuant to Technical Specification T.S. 6.9.2.

On October 4, 1985, maintenance being performed on the Fire Suppression Water System, FPS, (KP), required that the Electric Fire Pump, P-5-1, (P), be isolated from the station fire suppression water header. This action caused the station to intentionally enter Technical Specification action statement 3.7.9.1a. Later that day, the single remaining header source, the Diesel Fire Pump, P5-2,(P), tripped, placing the station in technical specification action statements T.S. 3.7.9.1b and 3.7.9.2. The Electric Fire Pump, P5-1, was returned to service and T.S. action statements 3.7.9.1b and 3.7.9.2 were exited fifty minutes from entry, leaving the station in T.S. action statement 3.7.9.1a.

This Special Report persuant to T.S. 6.9.2 is resulting from not being able to fully restore the diesel fire pump to operable status in seven days.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Davis-Besse	0 5 0 0 0 3 4 6	8 5	— 0 2 0	— 0 0	0 2 OF 0 3

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

Description of Occurrence:

The plant was in Mode 5, 0% thermal power on October 4, 1985, at 1325 EST, the time of the event. Work was being performed on the Fire Protection System, FPS, that required the Electric Fire Pump, P5-1, and the Electric Jockey Fire Pump, P6,(P), to be isolated from the FPS. This was an intentional entry into Technical Specification (T.S.) 3.7.9.1a at 0530 hours.

In order that the FPS pressure be maintained, the Diesel Fire Pump, P5-2, was started at 0603 hours. At 1325 hours the diesel fire pump trouble indication in the Control Room was observed.

An operator was dispatched and observed that the Diesel Fire Pump had tripped and would not restart. The plant entered T.S. action statements 3.7.9.1b and 3.7.9.2.

The Electric Fire Pump was returned to service and declared operable at 1415 hours; at which time the station met the requirements of T.S. 3.7.9.1b and 3.7.9.2, but remained in action 3.7.9.1a.

Attempts to return the Diesel Fire Pump to service were performed by the equipment operator. The manual over-ride of the fuel solenoid was used and the diesel started promptly. Shortly there-after the operator observed that engine coolant began to flow out of the radiator fill cap. The diesel was shutdown for trouble shooting and maintenance. This is a Special Report persuant to T.S. 6.9.2 resulting from not being able to restore the Diesel Fire Pump to an operable status in seven days.

Designation of Apparent Cause of Occurrence:

Subsequent trouble shooting the diesel fire pump engine revealed that an electrical connection at the diesel fire pump speed switch, SS 20088 (SIS) had broken. This had the effect of restricting fuel flow to the engine by deenergizing the fuel solenoid.

The radiator fill cap was found to provide a poor fit, thus not able to provide the proper seal.

Pressure testing of the diesel engine coolant system revealed that the coolant pump seal was in need of replacement. Parts availability delayed repair and full operability, however the Diesel Fire Pump could have been run in an emergency.

Analysis of Occurrence:

During the time when the Electric Fire Pump was unavailable and the Diesel Fire Pump was not operating properly, the local fire department was ready to respond to the station call and the Diesel Fire Pump could have been run in lieu of the maintenance considerations, to fight a fire.

Once the Electric Fire Pump was made available, the FPS header pressure was able to be maintained by the Electric Fire Pump. The Diesel Fire Pump could have been used, again, in lieu of the maintenance considerations, along with local fire department resources, for redundency of fire fighting capability.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Davis-Besse Unit 1	0 5 0 0 0 3 4 6	8 5	— 0 2 0	— 0 0	0 3 OF 0 3

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

Corrective Action:

Maintenance Work Order (MWO) 1-85-3117-00 was generated to investigate the cause of the occurrence. MWO 1-85-3117-01 documents the repair of the broken wire on the overspeed switch. It appears that faulty installation of the wire is the underlying cause of the failure. A visual inspection of the remaining electrical connections on the Diesel Fire Pump has revealed no evidence that a similar failure should reoccur.

Maintenance work Order numbers 1-85-3117-02 through 1-85-3117-08 document the maintenance performed on the Diesel Engine Cooling System. The coolant fill cap was discovered not to be providing the tight seal required for proper cooling system operation. The proper seal was achieved by work performed under MWO 1-85-3117-06. Preventative Maintenance Procedure 3-85-1379-01 was revised to ensure that the proper fit of the coolant fill cap is maintained in the future.

During the performance of these maintenance activities, the Diesel Engine Coolant Pump was replaced due to a deteriorating seal. This work was performed under MWO 1-85-3117-08.

Failure Data:

Investigation has revealed no previous occurance of this nature with this pump.

Report No: NP-39-85-01

DVR No(s): 85-154

TOLEDO EDISON

November 7, 1985

Log No. K85-1504
File: RR2 (NP-39-85-01)

Docket No. 50-346
License No. NPF-3

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Gentlemen:

LER No. 85-020
Davis-Besse Nuclear Power Station Unit 1
Date of Occurrence: October 11, 1985

Enclosed is Special Report 85-020 which is being submitted in accordance with Administrative Technical Specifications 6.9.2 to provide 30 day written notification of the subject occurrence.

Yours truly,

Louis F. Storz

Louis F. Storz
Plant Manager
Davis-Besse Nuclear Power Station

LFS/syc

Enclosure

cc: Mr. James G. Keppler,
Regional Administrator
USNRC Region III

Mr. Walt Rogers
DB-1 NRC Resident Inspector

IE22
1/1