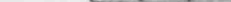


CONTROL BLOCK: | | | | | | | ① (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

CONTROL BLOCK: 

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	M	D	C	C	N	2	2	0	0	-	0	0	0	0	0	-	0	0	3	4	1	1	1	1	4			5					
7	8	LICENSEE CODE						14	15	LICENSE NUMBER										25	26	LICENSE TYPE					30	4			57	CAT	58	5

CON'T

REPORT SOURCE 0 1 7 8 L 6 0 5 0 0 0 3 1 8 7 0 7 0 6 8 2 8 0 5 2 6 8 3 9
60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

At 0450, during routine surveillance testing, it was discovered that

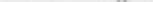

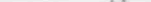
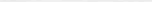
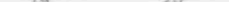
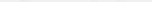

21 Diesel Generator would not start (T.S. 3.8.1.1). The redundant AC

power sources were verified per T.S. 3.8.1.1. 21 Diesel Generator was

repaired, tested satisfactorily and returned to service at 1528.

Similar events: None.

SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMP. SUBCODE	VALVE SUBCODE
----------------	---------------	------------------	------------------	------------------

(17) LER/RO REPORT NUMBER EVENT YEAR
8 2 —
21 22 23

SEQUENTIAL REPORT NO. 0 3 2 /
24 25 26 27

OCCURRENCE CODE 0 3
28 29

REPORT TYPE X —
30 31

REVISION NO. 1
32

ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT	SHUTDOWN METHOD	HOURS	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER						
A	X			Z	Z	0000	Y	N	A	F010						
33	18	34	19	35	20	37	40	41	23	42	24	43	25	44	47	26

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 Cause of this event was a broken inlet air check valve disc. Add-

1 1 | Additionally counterweighting of the check valve was absent, which would

1 2 | defeat the check valve's function if the valve was manually open. Check

1	2	valve disc replacement counterweighting, preventive and surveillance test
---	---	---

1 4 | procedure changes have been implemented to prevent occurrence.

FACILITY STATUS		% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
7	8	9			

1	5	E	(28)	1	0	0	(29)	NA	A	(31)	Surveillance Test
---	---	---	------	---	---	---	------	----	---	------	-------------------

	8	9	10	12	13	44	45	46	80
								ACTIVITY CONTENT RELEASED OF RELEASE	
								AMOUNT OF ACTIVITY (35)	
								LOCATION OF RELEASE (36)	

1 6 Z (33) Z (34) NA NA

PERSONNEL EXPOSURES			(39)
NUMBER	TYPE	DESCRIPTION	
1	1	1	NA

[illegible]

PERSONNEL INJURIES		NUMBER		DESCRIPTION		(41)	
1	2	3	4	5	6	7	8
		0	0	0	0	40	NA

7 8 9 11 12 80

1		9		Z		(42)		DESCRIPTION		(43)		NA	
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7 8 9 10
PUBL. INT. (45) 8306210246 830526
RDR ADCK 05000318 NRC USE ONLY

ISSUED		DESCRIPTION		PDR ADDRESS		PDR	
2	0	N	44	NA	S		

7 8 9 10 68 69 201 260 1713/1903

NAME OF PREPARER J. S. Lagiewski/D. E. Huseby PHONE: 301-269-4747/4803

NRC USE ONLY

8306210246 830526
PDR ADCK 05000318
S PDR

301-269-4747/4803

PHONE:

BALTIMORE GAS AND ELECTRIC COMPANY

P.O. BOX 1475

BALTIMORE, MARYLAND 21203

NUCLEAR POWER DEPARTMENT
CALVERT CLIFFS NUCLEAR POWER PLANT
LUSBY, MARYLAND 20657

May 26, 1983

Mr. James M. Allan
Acting Regional Administrator
U.S. Nuclear Regulatory Commission
Region 1
631 Park Avenue
King of Prussia, PA 19406

Docket No. 50-318
License No. DPR 69

Dear Mr. Allan:

In accordance with Technical Specification 6.9 please find the attached follow-up report for LER 82-32/3X, Rev. 1.

Should you have any questions regarding this report, we would be pleased to discuss them with you.

Very truly yours,

L B Russell
L. B. Russell
Plant Superintendent

LBR:DEH:mlk

cc: Director, Office of Management Information
and Program Control
Messrs: A. E. Lundvall, Jr.
J. A. Tiernan

*IE22
4/1*

LER NO. 82-32/3X, Rev. 1
DOCKET NO. 50-318
LICENSE NO. DPR 69
EVENT DATE 7/6/82
REPORT DATE 5/26/83
ATTACHMENT

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS

At 0450 on 7/6/82 Emergency Diesel Generator #21 was taken out of service due to failure to start during the performance of a Surveillance Test Procedure (T.S. 3.8.1.1). At 0458 #12 Diesel was started for verification of electric power supplies.

Troubleshooting on #21 Diesel was begun immediately. All checks on the diesel indicated it to be in good operating condition. At 1348 the diesel was tested satisfactorily and at 1528 it was returned to service.

When the event occurred, the probable cause was thought to be a low pressure condition in the starting air system. One starting air compressor had been out of service, and another was suspected of operating at a reduced efficiency. This, however was not borne out by the ensuing investigation. Given the recorded system parameters, all three diesels should have been able to start well within the 10 seconds allowed by Technical Specifications.

When no more substantial cause was discovered, it was decided to attempt to duplicate the start failure. This would give us the chance to more closely observe the conditions leading to a failure or to prove that those conditions would not cause such a failure.

A procedure was written to perform this test, but before it could be run, we again had trouble with #21 Diesel starting too slowly (during testing following a major diesel outage - no LER resulted). This time the cause was clearly not related to the starting air system.

Our troubleshooting disclosed a broken inlet air check valve disc. This explained our having observed a very low pressure at the air receiver during the startup sequence, which would lead inevitably to a very slow start or to a start failure. It did not, however, explain how the diesel could previously have failed to start on an initial try, then start well within limits a short time later.

The operation of the inlet air check valve is as follows:

CLOSED - it directs air from the outside air intake to the engine-driven scavenging blower inlet and from the blower discharge to the inlet of the exhaust-driven turbocharger blower, then through the turbocharger blower, and into the air receiver.

OPEN - it bypasses the engine driven blower and supplies air directly to the turbocharger. The engine driven blower is then rendered ineffective. The check valve is externally counterweighted to the closed position, so as to maximize the discharge pressure of the engine driven blower on startup and at low load (or until the turbocharger can supply sufficient differential pressure to override the check valve and open it).

During installation of the new inlet air check valve disc, it was discovered that part of the external counterweighting had been removed in the past, and that if the valve were manually opened, via the counterweight lever, it would remain in the open position, rendering the engine driven blower virtually useless until flow through the check valve created enough of a differential pressure to cause it to close again.

The counterweighting of all three diesels' inlet air check valves has been checked and corrected. New style discs (with solid shafts rather than two piece stub shafts) have been ordered and are on site. Additional preventive maintenance procedures and surveillance test procedures addressing check valve position and counterweighting and dash pot oil level have been instituted as a result of this investigation.

No further action is necessary.