

LICENSEE EVENT REPORT

UPDATE REPORT

PREVIOUS REPORT DATE: 2/3/83

CONTROL BLOCK:

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(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	57	CAT 58	

CON'T

0	1	REPORT SOURCE	L	6	0	5	0	0	0	3	1	8	7	0	1	0	4	8	3	8	0	5	2	6	8	3	9	
7	8	60	61	DOCKET NUMBER										68	69	EVENT DATE					74	75	REPORT DATE					80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | During surveillance testing at 0305, #21 vital inverter tripped result-

0 3 | ing in the loss of 21 vital instrument bus (2Y01). The loss of 2Y01

0 4 | caused pressurizer pressure controller 2-PIC-103 to be deenergized

0 5 | thereby shutting the shutdown cooling return isolation valve (SI-651)

0 6 | and rendering both shutdown cooling loops inoperable (T.S. 3.4.1.3.a).

0 7 | Power to the controller was restored and shutdown cooling reestablished

0 8 | at 0320, terminating the event. Similar event: 50-318/82-55.

09		SYSTEM CODE		CAUSE CODE		CAUSE SUBCODE		COMPONENT CODE				COMP. SUBCODE		VALVE SUBCODE			
0	9	E	B	B	C	G	E	N	E	R	A	F	Z				
7	8	9	10	11	12	13	14	15	16	17	18	19	20				
LER/RO REPORT NUMBER		EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE		REPORT TYPE		REVISION NO.							
17	8	3	—	0	0	1	—	0	3	X	1						
21	22	23	24	25	26	27	28	29	30	31	32						
ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED		NPRD-4 FORM SUB.		PRIME COMP. SUPPLIER		COMPONENT MANUFACTURER	
A	F	Z	Z	0	0	0	0	Y	N	A	E	3	5	5			
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47			

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 Testing and research has shown that the vital instrument bus fuses were

1 1 improper. The proper fuses were installed in both units' vital buses

1 2 under Facility Change 83-1001. The current limiting feature of inverters

1 3 11, 12, 21 and 22 has been removed under this change also. Replacement

1 4 of all inverters to state-of-the-art design is being considered.

FACILITY STATUS			% POWER			OTHER STATUS			METHOD OF DISCOVERY			DISCOVERY DESCRIPTION		
1	5	G	0	0	0	NA			B	Surveillance Testing				
ACTIVITY			CONTENT			AMOUNT OF ACTIVITY			LOCATION OF RELEASE					
1	6	Z	Z	NA		NA			NA					
PERSONNEL EXPOSURES			PERSONNEL INJURIES			LOSS OF OR DAMAGE TO FACILITY			PUBLICITY					
1	7	0	0	0	0	0	0	0	0	0	0	0	0	
NUMBER			NUMBER			TYPE			TYPE					
0			0			Z			Z					
DESCRIPTION			DESCRIPTION			DESCRIPTION			DESCRIPTION					
NA			NA			NA			NA					
8306210099			830526			PDR			PDR					
ADOCK			05000318			S			PDR					
NRC USE ONLY			NRC USE ONLY			NRC USE ONLY			NRC USE ONLY					

NRC USE ONLY

NAME OF PREPARER G. S. Pavis/L. F. Basso

PHONE: 301-269-4850/4933

LER NO. 83-01/3X, Rev. 1
DOCKET NO. 50-318
LICENSE NO. DPR 69
EVENT DATE 1/4/83
REPORT DATE 5/26/83
ATTACHMENT

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (cont'd)

Testing and research has revealed that the improper size and type fuses were installed in the vital instrument buses. The fuses in all four vital buses of each unit have been replaced, in consideration of individual bus loading, under Facility Change 83-1001. The current limiting feature of inverters 11, 12, 21 and 22, the four inverters that supply power to the ESFAS actuation modules, has been removed under this change also.

Results of short circuit tests performed on a vital bus indicate that when a fault occurred on a vital load, the load fuse would not isolate the fault before the inverter's current limiter operated. In doing so, the inverter's output voltage would collapse to near 0 volts and then return to normal, thus randomly deenergizing and reenergizing ESFAS modules, causing challenges to various safety systems. Similar tests done with the new fuses installed and the current limiter removed show that a vital load fault will not affect the inverter output, thus preventing inadvertent safety system operation. Removal of the current limiters does not affect total system reliability.

To upgrade the vital AC system, the replacement of all inverters to state-of-the-art design is being considered.

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 83-01/3X, 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:LFB:mlk

cc: Director, Office of Management Information
and Program Control

Messrs: A. E. Lundvall, Jr.
J. A. Tiernan

IE22
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