

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Calvert Cliffs, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 1 7	PAGE (3) 1 OF 0 3
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TITLE (4)
Failure to Meet Limiting Condition for Operation Prior to MODE Change

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					
									N/A					
0	5	3	1	8	4	8	4		0	5	0	0	0	0
									0	5	0	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 0 3	20.402(b)			20.406(e)			50.73(a)(2)(iv)			73.71(b)		
	20.406(a)(1)(i)			50.38(e)(1)			50.73(a)(2)(v)			73.71(c)		
	20.406(a)(1)(iii)			50.38(e)(2)			50.73(a)(2)(vii)			OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
	20.406(a)(1)(iii)			X 50.73(a)(2)(i)			50.73(a)(2)(viii)(A)					
	20.406(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B)					
20.406(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(ix)						

LICENSEE CONTACT FOR THIS LER (12)									
NAME P. Pieringer, Senior Engineer-Operations							TELEPHONE NUMBER		
							AREA CODE 3 0 1 2 6 0 - 4 4 7 0		

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS
B	J	D	D	E	T	W	1	2	0	Y

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

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

With the Plant in MODE 2, power was being held at less than 5% while S/G Chemistry conditions were improved. The Control Room Operator had established Channel A narrow range power indication on a trend recorder, and was using the channel to control power unaware that this channel was indicating half of actual power. As power was allowed to increase toward 5% (as read on Channel A) an axial power distribution (APD) pretrip alarm occurred on Channel A of the Reactor Protection System (JD). A comparison with Channels B, C, and D, which were reading between 6 and 7%, substantiated the alarm and led to the subsequent identification of a disconnected signal lead from Channel A upper detector. As power indicated 7% on the highest channel, MODE 1 was declared. Because the containment sump valves had been opened in MODE 2, the containment sump level alarm system was inoperable (T.S. 3.4.6.1) when the MODE change occurred. Consequently, the MODE 1 limiting conditions for operation were not met and a violation of T.S. 3.0.4 resulted. Procedure changes and a review of the event by Licensed Operators will be accomplished to prevent the recurrence of a similar event.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Calvert Cliffs, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 1 7 8 4 - 0 0 6 - 0 0 0 2 OF 0 3	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (If more space is required, use additional NRC Form 365A's) (17)

During May 30 and 31, 1984, a normal startup was performed following a shutdown for Saltwater System (BI) repairs. Upon entry into MODE 2 on the 31st, Steam Generator (SG) chemistry samples indicated secondary chemistry did not meet Plant Specifications. In accordance with Plant procedures, a hold was placed on further power increases until chemistry conditions were improved. Because of the time involved with the chemistry cleanup, a containment vent was established by opening the containment sump isolation valves (ISV). (This is a Plant specific vent path which utilizes the ECCS Room Sump (WK) and the ECCS Ventilation System (VF) to reduce containment pressure.) This placed the Plant within action statement 3.4.6.1.

Because Plant procedures required minimum chemistry specifications prior to entry into MODE 1, power was being controlled between 2 and 5%. This was being done by monitoring a computer point for Channel A linear range power (JD) on the computer display and on a trend recorder. The computer point is an average of the signals from upper and lower detectors making up Channel A. If one detector fails low then indication will be half what it should be. Averaged signals from Channels B, C, and D are only available at the Reactor Protective System (JD) cabinets at the back of the Control Room. The Control Panel indication normally used to corroborate the computer point is Q Power, a signal obtained from the Δ T power calculator drawer of the Reactor Protective System (JD) which corresponds to either Δ T power or nuclear instrumentation power depending on which is highest.

During this event, the Operator initially compared Q power indication with the Channel A computer value. Since primary temperatures were slightly elevated at the time, Δ T power was being displayed for the Q power value. Knowing this, the Operator correctly gave the nuclear instrumentation power value priority as the more accurate value. Actually, while Δ T power was high, the Channel A nuclear instrumentation value was low because of a failed upper detector. However, with power at only 1 to 2%, measurement and indication accuracies were not sensitive enough to allow the Operator or alarm circuits to identify the condition. With the information available to the Operator, there was no reason for him to suspect the Channel A indication at this point.

As power was allowed to increase slowly towards 5% (as read on Channel A) the deviation between Channel A and Channels B, C, and D increased until an Axial Power Distribution (APD) pretrip alarm on Channel A of the Reactor Protection System (JD) actuated.

When the APD bistable actuated, a comparison of Channel A (reading 3%) with Channels B, C, and D (reading between 6 and 7%) substantiated the alarm and led to the subsequent identification of a disconnected failed signal lead from the Channel A upper detector to the linear range drawer. The lead was found to be pinched between the drawer and cabinet as a result of racking in the drawer following outage work and had become disconnected as a result of a faulty cable connector.

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

With power at 7% on the highest channel, it was realized that a MODE change had been inadvertently made. At 0520 on 31 May 1984, MODE 1 was declared. Because the containment sump valves (ISV) had been opened in MODE 2, the containment sump level alarm was inoperable (T.S. 3.4.6.1) when the inadvertent MODE change was made. Consequently, the MODE 1 Limiting Conditions for Operation were not met and a violation of T.S. 3.0.4 resulted.

During this event all equipment required to be operable by the Technical Specification remained operable except for the Containment Sump Level Alarm System. The alarm system, which would have been immediately operable with the containment sump isolations shut, is redundant to the containment atmosphere particulate radioactivity monitoring system and the containment gaseous radioactivity monitoring system. Consequently, Baltimore Gas and Electric has concluded that this event could not have produced consequences of a more serious nature under other credible circumstances.

The cause of this event was the lack of appropriate controls and guidance in the appropriate operating procedure combined with a failure of the operator to perform a periodic review of redundant indications. To prevent a recurrence of a similar event, the following corrective actions will be taken:

1. The operating procedure for Plant startup will be modified as follows:
 - a. Provide direction that MODE 1 be declared based on the highest Q Power indication.
 - b. Provide direction for reviewing redundant power indication on a periodic basis.
2. All Licensed Operators will receive training during the annual requalification cycle on the conditions of this event.
3. All Control Technicians will be apprised of this LER and instructed to ensure the instrument drawer is installed properly to prevent damage to the connector.

No similar events have been reported.

BALTIMORE GAS AND ELECTRIC COMPANY

P.O. BOX 1475

BALTIMORE, MARYLAND 21203

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

June 27, 1984

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

Docket No.: 50-317
License No.: DPR 53

Dear Sirs:

The attached LER 84-006 is being sent to you as required by 10 CFR 50.73.

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

Very truly yours,

LBR
L. B. Russell

Plant Superintendent

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LBR:PAP:srm

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

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