

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Calvert Cliffs, Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 3 1 1 7 1 OF 0 2										PAGE (3) 1 OF 0 2			
TITLE (4) Reactor Trip caused by Moisture Separator High Level																							
EVENT DATE (5)			LER NUMBER (8)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (6)													
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES						DOCKET NUMBER(S)								
0 8	0 6	8 5	8 5	0 0 8	0 0 0	0 9	0 5	8 5							0 5 0 0 0								
OPERATING MODE (9) 1			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																				
POWER LEVEL (10) 0 1 1 7			20.405(a)				20.405(e)				X 90.73a(2)(iv)				73.71(b)								
			20.405(a)(1)(i)				90.36(e)(1)				90.73a(2)(vi)				73.71(e)								
			20.405(a)(1)(ii)				90.36(e)(2)				90.73a(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 308A)								
			20.405(a)(1)(iii)				90.73a(2)(i)				90.73a(2)(viii)(A)												
			20.405(a)(1)(iv)				90.73a(2)(ii)				90.73a(2)(viii)(B)												
			20.405(a)(1)(v)				90.73a(2)(iii)				90.73a(2)(ix)												
LICENSEE CONTACT FOR THIS LER (12)												TELEPHONE NUMBER											
NAME Barry Sullivan, Operational Safety Analyst												AREA CODE 3 0 1 1						2 1 6 0 1 - 1 4 1 3 1 5					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																							
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC													
X	T/B	1 1 3 3	G 0 8 0	Yes																			
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)						MONTH		DAY		YEAR	
YES (If yes, complete EXPECTED SUBMISSION DATE)												X NO											

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

At 0427 on August 6, 1985, Unit 1's Main Turbine tripped on High Moisture Separator Reheater Level caused by the High Level Dump Manual Isolation Valve being left in the shut position after maintenance was performed. Unit 1 Reactor then tripped on Turbine Loss of Load. At the time of the trip, reactor power was approximately 17% and being returned to full power operation.

All systems performed as expected except the Turbine Generator Output Breaker, the Exciter Field Disconnect, and the Generator Field Breaker. These three components are designed to trip if all four of the Main Turbine Main Stop Valves (MTMSVs) are shut. However, the two breakers and one disconnect did not trip as designed, even though all the MTMSVs were shut. The Generator Output Breaker tripped on reverse power and the Exciter Field Disconnect and Generator Field Breaker had to be manually tripped. Investigation revealed a failed limit switch on MTMSV 1-MT-4-SV. This switch is one of four limit switches wired in series which are designed to trip the two breakers and one disconnect listed above if all MTMSVs are shut. This switch was replaced prior to restarting Unit 1.

Maintenance was performed on the High Level Dump Valve after it was added as supplementary work under an existing tagout. The form used to add supplementary jobs to an existing tagout will be modified to include specific instructions concerning the post maintenance condition of worked components.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES 8/31/85

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

TEXT (If more space is required, use additional NRC Form 305A's) (17)

At 0427 on August 6, 1985, while at 17% power during startup, the Unit 1 Main Turbine (EHS TA-TRB) tripped on High Moisture Separator Reheater (EHS SN-MSR) level caused by the High Level Dump Manual Isolation Valve 1-RDV (EHS TB-DISC) being shut. Unit 1 Reactor (EHS AC-RCT) then tripped on Turbine Loss of Load.

All systems performed as expected except the Turbine Generator Output Breaker (EHS TB-BKR), Exciter Field Disconnect (EHS TB-DISC) and the Generator Field Breaker (EHS TB-41). These three components are designed to trip if all four of the Main Turbine Main Stop Valves (MTMSVs) (EHS TA-ISV) are shut. However, all three components did not trip as designed even though all four MTMSVs went shut. The Generator Output Breaker tripped on reverse power and the Exciter Field Disconnect and Generator Field Breaker had to be manually tripped. Following the trip, the Control Room Operators properly evaluated the event and carried out the appropriate actions for reactor trip, Emergency Operating Procedure Number 1.

Investigation into the maintenance records revealed that 1-RDV-106 was repacked on August 1, 1985. It appears that this valve was not repositioned to the open position (as required for startup) after the maintenance was completed. Two factors contributed to this situation:

1. The Maintenance Request (MR) used to perform this work did not specify what position the valve should be left in after the maintenance was performed.
2. This MR was performed under an existing tagout after it was added as supplementary work. The form used to add supplementary jobs to an existing tagout was reviewed and noted to be ambiguous concerning the positioning of worked components after maintenance is completed.

The following corrective action will be taken as a result of this event: The form used to add supplementary jobs to an existing tagout will be modified to include specific instructions concerning the post maintenance condition of worked components.

Investigation into the failure of the three electrical components to trip as designed was also performed. This revealed a failed limit switch (EHS TB-33) on MTMSV 1-MT-4-SV. Each of the four MTMSVs has a limit switch which is part of the trip circuitry needed to trip the three electrical components. Since the four limit switches are wired in series, the failure of any one of them is sufficient to disable the trip circuitry. This is why the Generator Output Breaker, Exciter Field Disconnect, and the Generator Field Breaker failed to automatically trip on the main turbine trip. This switch was replaced and tested satisfactorily prior to restarting Unit 1.

No similar events have been previously reported. The contact for further discussion of this event is B. J. Sullivan, (301) 260-4385.

BALTIMORE GAS AND ELECTRIC COMPANY

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BALTIMORE, MARYLAND 21203

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

September 5, 1985

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 85-08 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 Russell

L. B. Russell
Plant Superintendent

re
LBR/BJS/pah

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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