

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
Calvert Cliffs, Unit 1DOCKET NUMBER (2)
0 5 0 0 0 3 1 7
PAGE (3)
1 OF 0 3

TITLE (4)

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	4	8	5	8	5	0	0	3	0	0	0
0	4	8	5	0	0	0	3	8	0	5	0

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)									
POWER LEVEL (10) 0 0 0	20.402(b)	20.406(a)	60.73(a)(2)(iv)	73.71(b)						
	20.406(a)(1)(i)	60.36(a)(1)	60.73(a)(2)(v)	73.71(a)						
	20.406(a)(1)(ii)	60.36(a)(2)	60.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 305A)						
	20.406(a)(1)(iii)	60.73(a)(2)(i)	60.73(a)(2)(vii)(A)							
	20.406(a)(1)(iv)	60.73(a)(2)(ii)	60.73(a)(2)(vii)(B)							
	20.406(a)(1)(v)	60.73(a)(2)(iii)	60.73(a)(2)(viii)							
	20.406(a)(1)(vi)	60.73(a)(2)(iv)	60.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)

NAME
K. B. Cellars, Engineer - PMDTELEPHONE NUMBER
AREA CODE
3 0 1 2 6 0 - 4 8 5 0

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	5	B	R	V	D	2	4	3	Y

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) ☒ NO ☐EXPECTED SUBMISSION DATE (15)
MONTH DAY YEAR

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

On April 6, 1985, the Plant was shutdown in MODE 3 in preparation for a refueling outage. The reactor coolant temperature was lowered to approximately 500°F. A Surveillance Test Procedure (STP) was performed to check and adjust as necessary the main steam safety valve (MSSV) setpoints. Seven of the sixteen MSSVs were found to be out of tolerance as specified by Technical Specification 3/4.7.1.1. The MSSVs were reset prior to completion of the test. At the conclusion of the testing, the Plant was placed into cold shutdown in preparation for refueling. To prevent recurrence of this event the MSSVs have been placed on a preventive maintenance schedule to overhaul eight MSSVs each refueling outage.

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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)		
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		8 5	0 0 3	0 0	0 2	OF	0 3

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

On April 6, 1985, seven of the sixteen main steam safety valves (SB-RV) were found out of their setpoint tolerance band. The Plant was in MODE 3 and reactor coolant temperature was approximately 500°F at the beginning of a refueling outage. The main steam safety valves were found out of tolerance during a surveillance test procedure. As required by the surveillance test, the main steam safety valves were adjusted back into their setpoint tolerance band by 1330 on April 6, 1985. The Plant was cooled down and entered MODE 4 at 1920 on April 6, 1985. The Plant entered MODE 5 at 0347 on April 7, 1985, and subsequently continued with the refueling outage.

The Plant contains two steam generators, each with its own steam header. Each of the main steam headers contain eight main steam safety valves. The main steam safety valves are a Dresser Industries type C-3707RA maxiflow safety valve, 1500 PSIG class; constructed in accordance with ASME Boiler and Pressure Vessel Code Section III.

The relieving capacity of the main steam safety valves is sized to keep secondary system pressure limited to its design pressure during the most severe anticipated system operational transient. The most severe anticipated operational transient is a main turbine trip from 100 percent power coincident with an assumed loss of condenser heat sink and no turbine bypass to the condenser. At the time of the event the Plant was in MODE 3 with both steam generators and condenser operable. The technical specification basis for 3/4.7.1.1 states in part that two operable main steam safety valves are required to remove decay heat. Nine valves were within tolerance at the time of the event. The as found status of the main steam safety valves is shown in the table below:

SETPOINT	NO. OF VALVES THAT SHOULD BE AT THAT SETPOINT	NO. OF VALVES AS FOUND AT THAT SETPOINT
985	4	4
995	4	1
1015	4	2
1035	4	2
Below Setpoint Bands	0	7
Above all Setpoint Bands	0	0

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

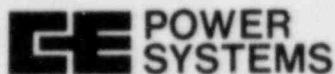
FACILITY NAME (1) Calvert Cliffs, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 1 7 8 5 - 0 0 3 - 0 0 0 3 OF 0 3	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

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

As can be seen from the table, no valves were above any of the setpoint bands. The Nuclear Steam Supply System vendor for the Plant has analyzed the as found settings and concluded that the plant was not operating in an unsafe condition, the safety analysis was not violated, nor would offsite dose limits have exceeded the limiting offsite dose event.

Past corrective actions have been to inspect and overhaul valves with known deficiencies. No corrective maintenance other than seat polishing has been necessary. To reduce the probability of recurrence of this event, the main steam safety valves have been placed on a more frequent inspection schedule. Two actuator springs will be sent to the manufacturer for testing during the first refueling outage following receipt of spare actuator springs. In addition, cycle 8 core reload analysis has effectively increased the tolerance band for the setting on these valves.

Past testing of these valves has shown that since October of 1980, twenty-six tests have been conducted on these valves on Unit 1. Four main steam safeties have been found out of tolerance prior to this event.



April 23, 1985

BG&E-85-121

Mr. J. Mihalcik
Baltimore Gas & Electric Company
Lusby Post Office
Lusby, Maryland 20657

Subject: MAIN STEAM SAFETY VALVE SETPOINTS

Enclosure: (1) Calvert Cliffs Unit #1 Main Steam Safety Valve Setpoints
Justification

Dear Mr. Mihalcik:

In response to a request by Mr. M.E. Bowman, Enclosure (1) provides a justification of the main steam safety valve setpoints as tested following Calvert Cliffs Unit #1 Cycle-7 operation.

The opening setpoint pressure of several of these valves violated the Technical Specification #3.7.1.1, Table 4.7-1, setpoints (including drift allowance) and were less than the values used in the reload license submittal safety analysis for Unit #1 Cycle-7. Enclosure (1) addresses the impact of the actual safety valve opening setpoints upon the licensing submittal analysis. It is concluded that, even though the technical specification limits may have been exceeded, the plant was not operating in an unsafe condition.

If you have any questions, please contact me or M.A. Michelsen (ext. 5261).

Very truly yours,

A handwritten signature in dark ink, appearing to read 'R.R. Mills', written in a cursive style.

R.R. Mills
Project Manager

RRM:MAM:ejz
Encl.; w/cy.

cc: M.E. Bowman, w/cy.
K. Cellars, w/cy.
L.H. Hager, C-E Site Mgr., w/ cy.
M.A. Michelsen, w/cy.
J.L. Bennett, w/o cy.

H.C. Irwin, w/cy.
J.E. Baum, w/cy.
C.W. Lepine, w/cy.
A. Malliakos, w/cy.

Enclosure (1) to
BG&E-85-121

Calvert Cliffs Unit 1 Main Steam Safety
Valve Setpoints Justification

During a telephone conversation on April 22, 1985 between M.E. Bowman (BG&E) and M.A. Michelsen (C-E), BG&E provided a listing of the actual opening setpoints of main steam safety valves (MSSV) following Unit #1 Cycle-7 operation. The data provided is summarized below:

Valve Number	Tech Spec Value $\pm 1\%$ (PSIG)	As-Found Setpoint (PSIG)	As-Found - T/S (PSI)
RV-3992	985	959	-26
-4000	985	980	-5
-3993	985	975	-10
-4001	985	964	-21
-3994	995	995	0
-4002	995	961	-34
-3995	995	987	-8
-4003	995	987	-8
-3996	1015	1024	+9
-4004	1015	1000	-15
-3997	1015	1014	-1
-4005	1015	986	-29
-3998	1035	1023	-12
-4006	1035	1035	0
-3999	1035	1010	-25
-4007	1035	1032	-3

A review of the impact on the safety analysis using the actual setpoints concludes that (for the purpose of the LER BG&E is required to file with the NRC) BG&E was not operating in an unsafe condition nor was the safety analysis violated. Of the 16 MSSV's, 8 MSSV setpoints were found to be lower than the technical specification allowable value and none were higher than allowable. Since these valves would have opened earlier than assumed in the safety analysis, the only safety concern is that of increased steam mass release that could have occurred during an event that lifts the MSSV's, with its potential offsite dose implications. However, the offsite dose limits would not have exceeded the limiting offsite dose event (i.e., steam line break) reported in the reload licence submittal for Unit 1 Cycle-7. Therefore, the MSSV's with setpoints outside the technical specification allowable values did not result in the plant being in an unsafe condition during Unit 1 Cycle-7 operation.

BALTIMORE GAS AND ELECTRIC COMPANY

P.O. BOX 1475

BALTIMORE, MARYLAND 21203

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

May 3, 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 85-03 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

KBC
LBR:KBC/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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