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Constellation
Nuclear

Calvert Cliffs
Nuclear Power Plant

A Member of the
Constellation Energy Group

December 8, 2000

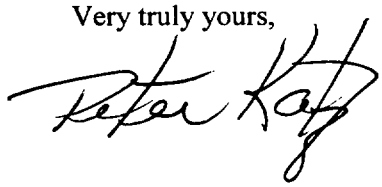
U.S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 1; Docket No. 50-317; Renewed License No. DPR 53
Licensee Event Report 2000-006
Number 12 Containment Spray Pump Circuit Breaker Failed to Close

The attached report is being sent to you as required under 10 CFR 50.73 guidelines. Should you have questions regarding this report, we will be pleased to discuss them with you.

Very truly yours,



PEK/JKK/bjd

Attachment

cc: R. S. Fleishman, Esquire
J. E. Silberg, Esquire
Director, Project Directorate I-1, NRC
A. W. Dromerick, NRC
H. J. Miller, NRC
Resident Inspector, NRC
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NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Calvert Cliffs Nuclear Power Plant, Unit 1	050000 317	1 OF 003

TITLE (4)

Number 12 Containment Spray Pump Circuit Breaker Failed to Close

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 NAME	DOCKET NUMBER
										050000
11	10	2000	2000	- 006	- 00	12	08	2000	FACILITY NAME	DOCKET NUMBER
										050000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT O THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	100		20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)
			20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(ix)
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
			20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		or in NRC Form 366A

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
J. K. Kirkwood	410-495-2013

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
X	BE	BKR	B455	Y					

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (16)	MONTH	DAY	YEAR
X	YES (If yes, complete EXPECTED SUBMISSION DATE).		NO		02	28	2001

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) **(16)**

During surveillance testing on November 10, 2000, at 0200, the Asea Brown Boveri, Inc. 4-kV Vacuum Circuit Breaker for 12 Containment Spray Pump failed to close upon the receipt of an auto-start signal. Troubleshooting revealed the breaker was in a trip-free condition. This same breaker failed to close during similar surveillance testing on October 12, 2000, and subsequent testing indicated the breaker was operating satisfactorily.

The breaker was replaced with a General Electric Magne-Blast circuit breaker. The General Electric breaker was satisfactorily tested and 12 Containment Spray Pump was declared operable November 10, 2000, at 1800. Unit 1 was in Mode 1, operating at 100 percent power at the time of the event, the event had no affect on the operation of the unit.

The cause of the breaker failing to close has not been determined. A root cause analysis team is investigating the event.

I. DESCRIPTION OF EVENT

During surveillance testing on November 10, 2000, at 0200, the Asea Brown Boveri, Inc. (ABB) 4-kV Horizontal Rollout Vacuum Circuit Breaker for 12 Containment Spray Pump (CSP) failed to close upon receipt of an Engineered Safety Feature Actuation System (ESFAS) safety injection actuation signal (SIAS) auto-start. With the aid of a technician from the manufacturer of the circuit breaker operating mechanism, plant staff conducted detailed troubleshooting, including the use of a data recorder to monitor electrical parameters, during the breaker testing. The breaker tested satisfactorily and the Surveillance Test Procedure (STP) was conducted satisfactorily at 1430 November 10, 2000. During a subsequent performance of the STP at 1500 the same day, the breaker again failed to close. We did not have a reasonable assurance of operability of the 12 CSP due to the intermittent failure of the ABB circuit breaker. The ABB circuit breaker was removed from the 12 CSP breaker cubicle and replaced with a General Electric (GE) Magne-Blast 4-kV circuit breaker. The STP was successfully performed on 12 CSP with the GE Magne-Blast circuit breaker installed, and 12 CSP was returned to service.

Earlier, on October 12, 2000, Plant Operators were conducting an STP involving the 12 Saltwater Pump. During the STP for the 12 Saltwater Pump, the 12 CSP breaker operated satisfactorily. However, operators noticed a problem that required repeating the STP. During the retest, the 12 CSP breaker failed to close upon receipt of an auto-start signal from the SIAS. Troubleshooting and subsequent testing and cycling of the breaker revealed no operating problems with the breaker. The breaker was reinstalled in the 12 CSP breaker cubicle, tested satisfactorily, and the 12 CSP was returned to service. Plant Staff increased the frequency of the STP from quarterly to monthly to more closely monitor the affected breaker.

II. CAUSE OF EVENT

The cause of the event is unknown at this time. Troubleshooting and root cause analysis has not yet positively identified the failure mechanism. However, the most probable cause is that the breaker was not inserted fully into the cubicle allowing the trip-free interlock to contact the interlock cam on the cubicle. This could cause an intermittent trip-free condition.

III. ANALYSIS OF EVENT

Plant Technical Specification 3.5.2 requires two operable emergency core cooling trains, with an allowed outage time of 72 hours for one inoperable train of emergency core cooling. If the root cause analysis determines the failure mechanism of the breaker prevented the breaker from operating from October 12, 2000 at 0235 to November 10, 2000 at 1800, the 72 hour allowed outage time was exceeded.

The five other ABB breakers with auto-start requirements have not demonstrated this failure in repeated tests.

The investigation of this event is ongoing and the results of the root cause analysis will be included in the supplement to this LER.

This event is reported in accordance with 10 CFR 50.73(a)(2)(i)(B), "any operation or condition prohibited by plant's Technical Specifications."

IV. CORRECTIVE ACTIONS

A. The suspect ABB breaker was replaced with a GE Magne-Blast breaker. The Magne-Blast breaker tested satisfactorily.

B. A supplemental Licensee Event Report will be submitted when the root cause analysis is complete.

V. ADDITIONAL INFORMATION

A. Component Identification

Component	IEEE 803 EIIS Function	IEEE 805 System ID
Circuit Breaker	BKR	BE

B. Previous Similar Events

No other events of this type have occurred at Calvert Cliffs Nuclear Power Plant.