LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
DIABLO CANYON UNIT 2	0 5 0 0 0 3 2 3 1	OF 0 4

TITLE (4) CLOSURE OF RHR CROSSTIE VALVE 8716B FOR MAINTENANCE JEOPARDIZES SYSTEM OPERABILITY

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 3	1 7	8 7	8 7	0 0 2	0 1	0 2	0 5	8 8		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (11)
POWER LEVEL (10)	1 0 0	[X] 10 CFR 50.73(a)(2)(i)(b)
		[ ] OTHER (Specify in Abstract below and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (AREA CODE)
RICHARD M. LUCKETT, REGULATORY COMPLIANCE ENGINEER	8 0 5 5 9 5 - 7 3 5 1

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

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

ABSTRACT (16)

On March 17, 1987, at 0625 PST, with Unit 2 in Mode 1 (Power Operation) at 100 percent power, Residual Heat Removal (RHR) crosstie valve 8716B was closed and removed from service for maintenance. This action was not consistent with the safety analysis assumption that RHR injection into all four Reactor Coolant System (RCS) cold legs would be available, assuming the single active failure of one RHR pump. The valve closure violated Technical Specification 3.5.2, in that if only one RHR pump were operable, injection flow would be provided to only two RCS cold legs. However, subsequent evaluations show that during an accident flow through two RCS cold legs is sufficient to maintain cooling within design and regulatory limits.

When valve 8716B was closed, both RHR pumps were operable and capable of injecting flow into all four RCS cold legs.

Upon identification of the concern, the valve was opened and returned to service.

Additional guidance has been provided to Operations personnel on the repositioning or removal from service of system-related Emergency Core Cooling System (ECCS) valves. Plant Engineering has reviewed all applicable test procedures relative to this guidance.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
DIABLO CANYON UNIT 2	0 5 0 0 0 3 2 3	8 7	0 0 2	0 1	0 2 OF 0 4

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

I. Initial Conditions

Unit 2 was in Mode 1 (Power Operation).

II. Description of Event

A. Event:

On March 17, 1987, at 0625 PST, with Unit 2 in Mode 1 (Power Operation) at 100 percent power, Residual Heat Removal (RHR)(BP) crosstie valve 8716B was closed and removed from service for maintenance. This action was not consistent with the RHR system safety analysis assumption that RHR injection into all four Reactor Coolant System (RCS)(AB) cold legs would be available, assuming the single active failure of one of the RHR pumps. The closure of the crosstie valve violates Technical Specification 3.5.2, in that if only one RHR pump were operable, injection flow would be provided to only two of the four RCS cold legs.

During the time that valve 8716B was closed, both RHR pumps were operable and together capable of injecting flow into all four RCS cold legs.

Valve 8716B was removed from service to allow the installation of a position indication device. To perform this activity, power was required to be removed from the valve operator, making the valve inoperable. Operations personnel determined that since valve 8716B is included in Technical Specification Table 3.6-1, "Containment Isolation Valves," and is required by Technical Specification limiting condition for operation 3.6.3 to be operable, then making it inoperable required that it be closed to meet the associated action statement. During the time it was closed, Operations personnel also determined that they were in a 72 hour allowed outage time based on the requirement of Technical Specification 3.5.2, Action a.

Upon identification of the concern, RHR crosstie valve 8716B was opened and returned to service.

B. Inoperable structures, components or systems that contributed to the event:

None

C. Dates and approximate times for major occurrences:

1. March 17, 1987, 0625 PST: Event date - RHR crosstie valve 8716B closed and removed from service for maintenance.

2. March 18, 1987, 1027 PST: Discovery date - RHR crosstie valve 8716B opened and returned to service.

D. Other systems or secondary functions affected:

None

E. Method of discovery:

Identified by Operations Management personnel familiar with the concern over closing the RHR crosstie valves, who noted that valve 8716B was closed and removed from service for maintenance.

F. Operator actions:

None required.

G. Safety system responses:

Not applicable.

III. Cause of Event:

A. Immediate cause:

Plant personnel closed RHR crosstie valve 8716B and removed it from service for maintenance.

B. Root cause:

Information describing the impact of closing a crosstie valve on RHR system operability was not made available to plant operators and personnel involved in equipment clearance activities in a timely manner.

A contributing factor to this event was the confusion of the Operations personnel regarding the inclusion of valve 8716B, as a containment isolation valve, in Technical Specification Table 3.6-1. The table should include only those containment isolation valves required to ensure that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. However, the NRC staff reviewing the Technical Specifications required this table to include all valves that are on containment piping penetrations, even though many of them have safety-related functions that demand that they not isolate.

PG&E is pursuing a license amendment to correct or remove this table from the Technical Specifications.

IV. Analysis of Event:

The RHR system safety analysis assumption provided by Westinghouse requires that injection be available to all four RCS cold legs. The closure of RHR crosstie valve 8716B alone would not have prevented injection to all four RCS cold legs, since both RHR pumps were operable during this event. Therefore, since the RHR system safety analysis assumption was met, no adverse safety consequences or implications resulted from this event.

As a result of this event, Westinghouse has reevaluated the safety analysis assumption that requires RHR injection be available to all four RCS cold legs. Westinghouse reevaluated all affected LOCA and non-LOCA transients with the exception of the rod ejection accident, which was reevaluated by PG&E. Results of the reevaluations show that during an accident flow through two RCS cold legs is sufficient to maintain cooling within design and regulatory limits.

V. Corrective Actions:

Upon identification of the concern, RHR crosstie valve 8716B was opened and returned to service.

Additional guidance has been provided to Operations personnel on the repositioning or removal from service of those ECCS valves that are system-related rather than train-related. Plant Engineering has reviewed all applicable test procedures relative to this guidance.

VI. Additional Information:

A. Failed components:

None

B. Previous LERs on similar events:

None