NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
DIABLO CANYON UNIT 1	0 5 0 0 0 2 7 5	1 OF 0 2

TITLE (4)
REACTOR TRIP AND SAFETY INJECTION

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 5	1 8	8 5	8 5	—	0 1 4	—	0 0	0 6	1 8	8 5		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 §: (Check one or more of the following) (11)					
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	X	50.73(a)(2)(iv)		73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(2)(v)		73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)		50.73(a)(2)(vii)	X	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		SPECIAL REPORT
		20.405(a)(1)(iv)	50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		
		20.405(a)(1)(v)	50.73(a)(2)(iii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
DAVID P. SISK, REGULATORY COMPLIANCE ENGINEER	AREA CODE 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	
X	E E	I N V T	S 2 4 5	Y							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		0 7	1 0	8 5

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

At 0714 PDT, May 18, 1985, while in Mode 1 (power operation), Unit 1 had a reactor trip followed by a safety injection. All automatic equipment responded as designed except for diesel generator 1-3 which failed to maintain speed (see Special Report SR 85-04 dated June 17, 1985). The plant was stabilized in Mode 3 (Hot Standby) in accordance with procedures. All systems and equipment affected by this event were returned to normal operation.

This event was caused by the failure of the slave 2.5 KVA regulating transformer for instrument inverter IY-1-3. The failed transformer was replaced with a spare and the inverter was returned to service.

This was the sixth Emergency Core Cooling System (ECCS) actuation cycle to date that has resulted in the discharge of water into the reactor coolant system.

On June 6, 1985, five snubbers on the steam lines to the Auxiliary Feedwater Pump were found to be inoperable. The turbine driven Auxiliary Feedwater Pump was declared inoperable in accordance with the Technical Specifications. An investigation of the snubber damage has shown that it was caused by a water-hammer transient. Condensed water was in a steam supply line during the turbine-driven auxiliary feedwater pump start on Lo-Lo Steam Generator Level following the reactor trip and safety injection of May 18, 1985. More detail on the snubber damage will be provided in a supplemental report which will be submitted when the final engineering evaluation has been completed.

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

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

At 0714 PDT, May 18, 1985, while in Mode 1 (Power Operation), Unit 1 had a reactor trip followed by a safety injection. All automatic equipment responded as designed except for diesel generator 1-3 (EK)(DG) which failed to maintain speed (see Special Report SR 85-04). The plant was stabilized in Mode 3 (Hot Standby) in accordance with procedures. All systems and equipment affected by this event were returned to normal operation.

This event was caused by the failure of the slave 2.5 KVA regulating transformer (EE)(XPT) for instrument inverter IY-1-3 (EE)(INVT). This caused a loss of power to the Reactor Coolant Pump (RCP) breaker position indicator (JC)(ZI), which produced a RCP breaker (AB)(BKR) open signal and tripped the reactor. Since Unit 1 was above P-8 (Loss of Flow Permissive), only one RCP breaker open signal was required to produce the reactor trip signal. The safety injection signal occurred when two low steam pressure bistables were initiated as a result of a loss of an instrument bus (following the loss of the inverter) coincident with four high steam flow signals. These four signals were produced because the high steam flow setpoint is automatically reset to 40 percent upon a reactor trip.

The failed transformer was replaced with a spare. The replacement transformer was tested satisfactorily and the inverter was returned to service.

As a long term measure to improve reliability, the entire inverter will be replaced with a new improved design that features a single output regulator transformer, thereby, eliminating the slave transformer. This inverter will be replaced during the first available long term outage but no later than the end of the first refueling outage.

This was the sixth Emergency Core Cooling System (BQ) actuation cycle to date that has discharged water into the reactor coolant system (AB).

On the morning of June 6, 1985, plant personnel reported oil leaking from a snubber. As a result, Maintenance decided to inspect all snubbers attached to the steam lines supplying the Turbine Driven Auxiliary Feedwater Pump. During this inspection, five inoperable snubbers were found. In accordance with the Action Statement to T. S. 3.7.7.1, the Turbine Driven Auxiliary Feedwater Pump was declared inoperable. The inoperable snubbers were replaced on June 7 and June 8. Associated piping was inspected for damage and the pump was test operated and declared operable on June 8.

Investigation into the snubber damage found that two traps on the auxiliary feedwater pump steam supply line had been inadvertently left isolated after the completion of the one time vendor turbine generator warranty test. The isolated traps caused condensation to back up into the steam line. The transient on May 18, 1985 started the pump and the sudden steam supply depressurization and its increase in flow allowed the water hammer. A preliminary engineering evaluation of the snubber damage performed persuant to T.S. 4.7.7.1g indicated that the cause had been identified and that the line remains capable of meeting its design service. More detail on the snubber damage will be provided in a supplemental report which will be submitted when the final engineering evaluation has been completed.

PACIFIC GAS AND ELECTRIC COMPANY

PG&E — 77 BEALE STREET • SAN FRANCISCO, CALIFORNIA 94106 • (415) 781-4211 • TWX 910-372-6587

JAMES D. SHIFFER
VICE PRESIDENT
NUCLEAR POWER GENERATION

June 18, 1985

PGandE Letter No.: DCL-85-217

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

Re: Docket No. 50-275, OL-DPR-80
Diablo Canyon Unit 1
Licensee Event Report 85-014-00
Reactor Trip And Safety Injection

Gentlemen:

Pursuant to 10 CFR 50.73(a)(2)(iv) and as required by Diablo Canyon Unit 1 Technical Specification 6.9.2 and Technical Specification 3.7.1.2, PGandE is submitting the enclosed Licensee Event Report/Special Report concerning the inadvertent actuations of Engineered Safety Features (ESF), a reactor trip followed by a safety injection, and snubber damage caused by a water hammer in the steam supply line to the turbine driven Auxiliary Feedwater Pump.

This event has in no way affected the public's health and safety.

Kindly acknowledge receipt of this material on the enclosed copy of this letter and return it in the enclosed addressed envelope.

Sincerely,

for J. D. Shiffer

Enclosure

cc: J. B. Martin
Service List

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