

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1): **DIABLO CANYON UNIT 2** DOCKET NUMBER (2): **05000323** PAGE (3): **1 OF 03**

TITLE (4): **CIRCULATING WATER PUMP 2-2 MOTOR GROUND CAUSES A REACTOR COOLANT PUMP (12KV) BUS UNDERVOLTAGE REACTOR TRIP**

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		
06	27	86	86	0116	010	07	25	86			
									DOCKET NUMBER(S):		
									050000		
									050000		

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (11)

OPERATING MODE (9): **1**

POWER LEVEL (10): **1100**

10 CFR 50.73(a)(2)(iv)

OTHER (Specify in Abstract below and in Text, NRC Form 366A)

LICENSEE CONTACT FOR THIS LER (12): **DAVID P. SISK, REGULATORY COMPLIANCE ENGINEER**

TELEPHONE NUMBER: **805595-7350**

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
B	K/E	M/O	W11210	N					

SUPPLEMENTAL REPORT EXPECTED (14):  YES (If yes, complete EXPECTED SUBMISSION DATE)  NO

EXPECTED SUBMISSION DATE (15): MONTH: | DAY: | YEAR: |

ABSTRACT (16)

At 0538 PDT, June 27, 1986, with the unit in Mode 1 (Power Operation), a motor failure on circulating water pump (CWP) 2-2 caused a reactor coolant pump (12KV) bus undervoltage reactor trip. The transient condition did not cause a trip of the reactor coolant pumps due to the short duration of the undervoltage condition.

The unit was stabilized in Mode 3 (Hot Standby) in accordance with approved procedures.

The unit was operated at approximately 50 percent power while awaiting repairs to CWP 2-2. Repairs to CWP 2-2 were completed and the unit returned to full power on July 13, 1986.

To prevent similar occurrences, the other CWP motors for Units 1 and 2 will be disassembled, inspected and any problems found corrected as necessary during future refueling outages.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		86	016	00	02	OF 03

I. Initial Conditions

The plant was in Mode 1 (Power Operation) at 100 percent.

II. Description of Events

A. Event:

At 0538 PDT, June 27, 1986, with the unit in Mode 1 (Power Operation), a motor failure on circulating water pump (CWP) 2-2 (KE)(P) caused a reactor coolant pump (12kV) bus undervoltage reactor trip. The transient condition did not cause a trip of the reactor coolant pumps due to the short duration of the undervoltage condition.

The unit was stabilized in Mode 3 (Hot Standby) in accordance with approved procedures at 0600 PDT.

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

None

C. Dates and approximate times for major occurrences:

June 27, 1986, 0538 PDT: Event date and discovery date

July 13, 1986: CWD 2-2 returned to operation and the unit returned to full power.

D. Other systems or secondary functions affected:

None

E. Method of discovery:

The event was immediately apparent due to alarms and indications in the control room.

F. Operator actions:

The appropriate procedures were followed and the reactor trip breakers were reclosed.

G. Safety system responses:

1. The reactor trip breakers (JC)(BKR) opened.
2. The control rod drive mechanism (AA)(DRIV) allowed the control rod to drop into the reactor.
3. The turbine (TA)(TRB) tripped.

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TEXT (17)

4. Diesel generator 2-2 (EK)(DG) started due to a momentary undervoltage during the automatic change from auxiliary power to startup, but did not load.

III. Cause of Event

A. Immediate cause:

The reactor trip was caused by undervoltage on 12kV busses D and E (DA)(BU). Evaluation indicates that the undervoltage on 12kV busses D and E was caused by a coil to coil ground on the motor for circulating water pump 2-2 with the ground resulting from damage to the insulation on the motor coils. The insulation damage was caused by the coil spacers that had fallen out of position rubbing the coil insulation.

B. Root cause:

The cause of the failure of the spacers was an apparent manufacturing design defect that allowed the spaces to move from their original position. A field change has been implemented that will present recurrence.

IV. Analysis of Event

The reactor trip breakers opened as expected on a reactor coolant pump (12kV) bus undervoltage signal. The unit shut down as designed. Thus no safety consequences or implications resulted from this event.

V. Corrective Actions

During future refueling outages the remaining three CWP motors will be disassembled, inspected, and any problems found corrected as necessary.

VI. Additional Information

A. Failed components:

CWP 2-2 motor - Westinghouse  
Model - 13,000 hp, 11,500V, 631 Amp, special production motor for DCP.

B. Previous LERs on similar events:

None

# 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

July 25, 1986

PGandE Letter No: DCL-86-218

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

Re: Docket No. 50-323, OL-DPR-82  
Diablo Canyon Unit 2  
Licensee Event Report 2-86-016-00  
Circulating Water Pump 2-2 Motor Ground Causes  
Reactor Coolant Pump (12kV) Bus Undervoltage Reactor Trip

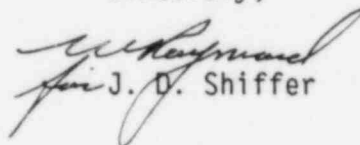
Gentlemen:

Pursuant to 10 CFR 50.73(a)(2)(iv), PGandE is submitting the enclosed Licensee Event Report concerning a reactor trip due to 12kV bus undervoltage.

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: L. J. Chandler  
J. B. Martin  
M. M. Mendonca  
B. Norton  
H. E. Schierling  
CPUC  
Diablo Distribution  
INPO

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