



**Pacific Gas and  
Electric Company**

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PG&E Letter DCL-00-054

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Docket No. 50-275, OL-DPR-80  
Docket No. 50-323, OL-DPR-82  
Diablo Canyon Units 1 and 2  
Licensee Event Report 1-2000-002-00  
Manual Control Room Ventilation Actuation Due To Smoke Infiltration

Dear Commissioners and Staff:

PG&E is submitting the enclosed licensee event report regarding an engineering safeguards features actuation system manual control room ventilation actuation due to smoke infiltration.

This event was not considered risk significant and did not adversely affect the health and safety of the public.

Sincerely,

David H. Oatley

cc: Steven D. Bloom  
Ellis W. Merschoff  
David L. Proulx  
Diablo Distribution  
INPO

Enclosure

DDM/2246/A0504285

IE22

# LICENSEE EVENT REPORT (LER)

|  |           |  |                |                   |          |          |                    |                 |          |   |                               |              |             |                             |                           |    |  |                        |
|--|-----------|--|----------------|-------------------|----------|----------|--------------------|-----------------|----------|---|-------------------------------|--------------|-------------|-----------------------------|---------------------------|----|--|------------------------|
| FACILITY NAME (1)<br><b>Diablo Canyon Unit 1</b>   |           |  |                |                   |          |          |                    |                 |          | DOCKET NUMBER (2)<br><b>0 5 0 0 0 2 7 5</b> |                               |              |             |                             | PAGE (3)<br><b>1 OF 5</b> |    |  |                        |
| TITLE (4)<br><b>Manual Control Room Ventilation Actuation Due To Smoke Infiltration</b>  |           |  |                |                   |          |          |                    |                 |          |   |                               |              |             |                             |                           |    |  |                        |
| EVENT DATE (5)   |           |  | LER NUMBER (6) |                   |          |          |                    | REPORT DATE (7) |          |   | OTHER FACILITIES INVOLVED (8) |              |             |                             |                           |    |  |                        |
| MO   | DAY       | YEAR   | YEAR           | SEQUENTIAL NUMBER |          |          | REVISION NUMBER    | MO              | DAY      | YEAR  | FACILITY NAME                 |              |             |                             | DOCKET NUMBER             |    |  |                        |
| <b>03</b>  | <b>09</b> | <b>2000</b>  | <b>2000</b>    | <b>-</b>          | <b>0</b> | <b>0</b> | <b>2</b>           | <b>-</b>        | <b>0</b> | <b>0</b>                                    | <b>04</b>                     | <b>10</b>    | <b>2000</b> | <b>Diablo Canyon Unit 2</b> |                           |    |  | <b>0 5 0 0 0 3 2 3</b> |
| OPERATING MODE (9)   |           | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (11)  |                |                   |          |          |                    |                 |          |   |                               |              |             |                             |                           |    |  |                        |
| <b>1</b>   |           | <div style="display: flex; justify-content: space-between;"> <span><b>X</b> 10 CFR <b>50.73(a)(2)(iv)</b></span> <span>OTHER _____</span> </div> |                |                   |          |          |                    |                 |          |   |                               |              |             |                             |                           |    |  |                        |
| POWER LEVEL (10)   |           | (SPECIFY IN ABSTRACT BELOW AND IN TEXT, NRC FORM 366A)   |                |                   |          |          |                    |                 |          |   |                               |              |             |                             |                           |    |  |                        |
| <b>1</b>   | <b>0</b>  | <b>0</b>   |                |                   |          |          |                    |                 |          |   |                               |              |             |                             |                           |    |  |                        |
| LICENSEE CONTACT FOR THIS LER (12)   |           |  |                |                   |          |          |                    |                 |          |   |                               |              |             |                             |                           |    |  |                        |
| <b>Roger Russell - Senior Regulatory Services Engineer</b>   |           |  |                |                   |          |          |                    |                 |          |   |                               |              |             | TELEPHONE NUMBER            |                           |    |  |                        |
|  |           |  |                |                   |          |          |                    |                 |          |   |                               |              |             | AREA CODE<br><b>805</b>     | 545-4327                  |    |  |                        |
| 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        |    |  |                        |
| <b>X</b>   | <b>A</b>  | <b>A</b>   | <b>M</b>       | <b>G</b>          |          |          | <b>E</b>           | <b>1</b>        | <b>2</b> | <b>0</b>                                    | <b>Yes</b>                    |              |             |                             |                           |    |  |                        |
|  |           |  |                |                   |          |          |                    |                 |          |   |                               |              |             |                             |                           |    |  |                        |
| SUPPLEMENTAL REPORT EXPECTED (14)  |           |  |                |                   |          |          |                    |                 |          | EXPECTED SUBMISSION DATE (15)               |                               |              |             | MON                         | DAY                       | YR |  |                        |
| [ ] YES (If yes, complete EXPECTED SUBMISSION DATE)  |           |  |                |                   |          |          |                    |                 |          | [ X ] NO                                    |                               |              |             |                             |                           |    |  |                        |
| ABSTRACT (Limit to 1400 spaces. i.e., approximately 15 single-spaced typewritten lines.) (16)  |           |  |                |                   |          |          |                    |                 |          |   |                               |              |             |                             |                           |    |  |                        |
| <p>On March 9, 2000, at 0906 PST, with Units 1 and 2 operating in Mode 1 (Power Operation) at 100 percent power, plant operators placed the control room ventilation system (CRVS) in pressurization mode (Mode 4) due to smoke. On March 9, 2000, at 0903 PST the Unit 1 control rod drive Motor-Generator (MG) Set 1-2 tripped due to overcurrent and heavy smoke was reported in the immediate area. Plant operators responded to alarms and indications in the control room and reports from fire crew members at the MG set location, and isolated the electrical power to MG Set 1-2. Approximately 3 minutes after the initial event, plant operators noticed the smell of smoke in the control room and placed the CRVS in Mode 4. A 4-hour non-emergency report was made to the NRC at 1158 PST in accordance with 10 CFR 50.72 (b)(2)(ii).</p> <p>The cause of this event was the failure of MG Set 1-2. Plant operators placed the CRVS in Mode 4 as a precautionary measure to prevent the build up of smoke in the control room.</p> <p>No corrective actions are required as the plant operators placed the CRVS in Mode 4 as a precautionary measure in accordance with good operating practices. However, as a prudent measure, a review will be performed of the cause of the heavy smoke and damage to MG Set 1-2 in accordance with plant procedures regarding plant equipment failures. This event is reported as a valid engineered safeguards features actuation system event to mitigate the potential for a continued infiltration of smoke into the control room challenging the habitability requirements for continued plant operation.</p> |           |  |                |                   |          |          |                    |                 |          |   |                               |              |             |                             |                           |    |  |                        |

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

| 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 | 2000           | -                 | 0 | 0 | 2 | -               | 0        | 0 | 2 OF 5 |

## TEXT

### I. Plant Conditions

Units 1 and 2 were operating in Mode 1 (Power Operation) at 100 percent power.

### II. Description of Problem

#### A. Background

There are two motor generator (MG)(AA) sets installed to provide Class II isolated electrical power to the reactor rod control system. Each MG set is capable of providing the required electrical power required to safely operate the plant. The MG sets are relied upon for control purposes only. If electrical power is lost due to failure of both MG sets, or opening of the reactor trip breakers, the reactor control and shutdown rods will fall into the core by gravity.

The Unit 1 MG sets are located on the Northwest side of the auxiliary building at elevation 115 feet. The area is provided with smoke detection for the low combustible area. Fire suppression is provided by local carbon dioxide hose stations, fire water hose stations, and portable fire extinguishers.

The Diablo Canyon Power Plant (DCPP) Final Safety Analysis Report (FSAR) Update evaluated the consequences of a postulated fire in this area and concluded that the loss of safe shutdown functions located in this area will not affect safe shutdown capability.

The control room ventilation system (CRVS) pressurization mode (Mode 4) is designed to ensure control room habitability during a postulated radiological or nonradiological event by providing a carbon filter recirculation and an alternate makeup source of air under positive pressure. With the control room pressurized from an alternate location and filtration to maintain air quality, the continued habitability of the control room is ensured.

#### B. Event Description

On March 9, 2000, at 0901 PST, a fire alarm was received in the auxiliary building 115 foot battery room area.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

| FACILITY NAME (1)    | DOCKET NUMBER (2) |   |   |   |   |   |   |   | LER NUMBER (6) |                   |   |   |   |                 | PAGE (3) |   |        |
|----------------------|-------------------|---|---|---|---|---|---|---|----------------|-------------------|---|---|---|-----------------|----------|---|--------|
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| Diablo Canyon Unit 1 | 0                 | 5 | 0 | 0 | 0 | 2 | 7 | 5 | 2000           | -                 | 0 | 0 | 2 | -               | 0        | 0 | 3 OF 5 |

### TEXT

On March 9, 2000, at 0903 PST, the Unit 1 control rod drive MG Set 1-2 tripped due to overcurrent. Heavy smoke was reported in the immediate area. Plant operators responded to alarms and indications in the control room and reports from fire crew members at the MG set location and isolated the electrical power to MG Set 1-2.

On March 9, 2000, at 0906 PST, plant operators placed the CRVS in Mode 4 due to a light smell of smoke.

On March 9, 2000, at 1158 PST, a 4-hour non-emergency report was made to the NRC in accordance with 10 CFR 50.72 (b)(2)(ii).

C. Inoperable Structures, Components, or Systems that Contributed to the Event

MG Set 1-2 failed creating heavy smoke.

D. Other Systems or Secondary Functions Affected

None.

E. Method of Discovery

Plant operators were immediately aware of the MG Set 1-2 failure due to alarms and indications received in the control room. Plant operators became aware of increasing smoke infiltration in the control room by smell.

F. Operator Actions

Plant operators responded to the alarms and indications in the control room of MG Set 1-2 trip and smoke sensor actuation, sounded the fire alarm dispatching operations and fire brigade members to the scene. Upon sensing the increasing smell of smoke in the control room, the shift foreman ordered the CRVS be placed in Mode 4 as a precaution.

G. Safety System Responses

Upon manual actuation, the CRVS shifted to Mode 4 as designed.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

| 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 | 2000           | -                 | 0 | 0 | 2 | - | 0               | 0        | 4 | OF | 5 |

TEXT

### III. Cause of the Problem

#### A. Immediate Cause

The heavy smoke from the failed MG Set 1-2 exited the auxiliary building and due to prevailing wind conditions, a portion was drawn into the CRVS intake.

#### B. Root Cause

The cause of the smoke infiltration into the CRVS intake from the auxiliary building was due to heavy smoke associated with a bearing failure of MG Set 1-2. Operator action was taken to place the CRVS in Mode 4 to prevent further build up of smoke in the control room.

### IV. Analysis of the Event

Manual actuation of the CRVS was a conservative action taken to ensure the continued habitability of the control room. The CRVS manual actuation was evaluated using the NRC's Significance Determination Process (SDP). In accordance with NRC Inspection Manual Chapter 06XX, Draft Revision 1, dated August 10, 1999, this actuation (condition) screens out "green" because it did not involve an actual loss of safety function of a mitigating system.

A fire in credible locations of DCPD have been previously evaluated and determined not to create a significant safety hazard due to the installation of adequate fire detection and suppression features provided. As part of the fire alarm response to specific areas, plant operators and fire brigade members are trained in pre-planned actions to terminate the event safely and minimize collateral damage and adverse plant operational effects.

The failure of MG Set 1-2 was also evaluated using the NRC's SDP. In accordance with NRC Inspection Manual Chapter 06XX, Draft Revision 1, dated August 10, 1999, the initiating event screens out "green" because this issue does not increase the likelihood of a reactor scram and the likelihood that a mitigation system equipment will not be available.

Therefore, this event is not considered risk significant and did not adversely affect the public health and safety.

This event is not considered to be a safety system functional failure.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

| 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 | 2000           | -                 | 0 | 0 | 2 | -               | 0        | 0 | 5 OF 5 |

TEXT

## V. Corrective Actions

### A. Immediate Corrective Actions

Plant operators and fire brigade members responded to the event, terminated electrical power, confirmed no active fire present, and evacuated the buildup of smoke in the auxiliary building MG Set 1-2 area.

### B. Corrective Actions to Prevent Recurrence

No corrective actions are required as the plant operators placed the CRVS in Mode 4 as a precautionary measure in accordance with good operating practices. This event is reported as a valid engineered safeguards features actuation system event to mitigate the potential for a continued infiltration of smoke into the control room challenging the habitability requirements for continued plant operation. However, as a prudent measure, a review will be performed of the cause of the heavy smoke and damage to MG Set 1-2 in accordance with plant procedures regarding plant equipment failures.

## VI. Additional Information

### A. Failed Components

MG Set 1-2 generator bearing failed.

### B. Previous Similar Events

None.