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 FACIL: 50-275 Diablo Canyon Nuclear Power Plant, Unit 1, Pacific Ga 05000275
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 SISK, D. Pacific Gas & Electric Co.
 RUEGER, G.M. Pacific Gas & Electric Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 94-016-00: on 940815, DGs started as designed upon de-energization of startup bus due to offsite wildfire. DGs performed as required by design, therefore no corrective action determined to be necessary. W/940912 ltr.

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Pacific Gas and Electric Company

PG&E
San Francisco
California
94104

Gregory M. Rueger
Senior Vice-President and
General Manager
Nuclear Power Generation

September 12, 1994

PG&E Letter DCL-94-202

U.S. Nuclear Regulatory Commission
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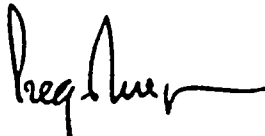
Docket No. 50-275, OL-DPR-80
Docket No. 50-323, OL-DPR-82
Diablo Canyon Units 1 and 2
Licensee Event Report 1-94-016-00
Diesel Generators Started as Designed Upon De-Energization
of Startup Bus Due to Offsite Wildfire

Gentlemen:

Pursuant to 10 CFR 50.73(a)(2)(iv), PG&E is submitting the enclosed Licensee Event Report concerning auto-start of the diesel generators (ESF actuation), as designed, upon de-energization of the startup bus due to an offsite wildfire.

This event did not adversely affect the health and safety of the public.

Sincerely,



Gregory M. Rueger

cc: L. J. Callan
Mary H. Miller
Kenneth E. Perkins
Sheri R. Peterson
Diablo Distribution
INPO

Enclosure

DC0-94-NR-N037

6626S/MSG/2246

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PDR ADDC 05000275
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Diablo Canyon Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 7 5	PAGE (3) 1 OF 7
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TITLE (4) **Diesel Generators Started as Designed Upon De-Energization of Startup Bus Due to Offsite Wildfire**

EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MON	DAY	YR	YR	SEQUENTIAL NUMBER	REVISION NUMBER	MON	DAY	YR	FACILITY NAMES	DOCKET NUMBER (5)	
8	15	94	94	- 0 1 6 -	0 0	9	12	94	Diablo Canyon Unit 2	0 5 0 0 0 3 2 3	
										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	<input checked="" type="checkbox"/> 10 CFR <u>10 CFR 50.73(a)(2)(iv)</u> <input type="checkbox"/> OTHER - _____ (Specify in Abstract below and in text, NRC Form 366A)	

LICENSEE CONTACT FOR THIS LER (12) David Sisk, Senior Regulatory Compliance Engineer	TELEPHONE NUMBER AREA CODE 805 NUMBER 545-4420
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs		

SUPPLEMENTAL REPORT EXPECTED (14)	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO			

ABSTRACT (16)

On August 15, 1994, at 1704 PDT, with Units 1 and 2 in Mode 1 (Power Operation) at 100 percent power, all six diesel generators (DGs) auto-started, as required, when the Diablo Canyon Power Plant (DCPP) startup bus de-energized following the loss of 230kV transmission lines due to an offsite wildfire. On August 15, 1994, at 1828 PDT, a one-hour, non-emergency report was made to the NRC in accordance with 10 CFR 50.72(b)(1)(v), "loss of offsite response capability," to report that many of the early warning sirens were inoperable due to the wildfire. This report was updated on August 16, 1994, at 1100 PDT to report that the de-energization of the 230kV transmission line for the DCPP startup bus had resulted in the auto-start of all six DGs.

The DGs performed as required by design, therefore no corrective action was determined to be necessary. The reportability guidance procedure was revised to include anticipatory DG starts due to loss of the startup bus as an engineered safety feature actuation.

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TEXT (17)

I. Plant Conditions

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

II. Description of Event

A. Summary

All six emergency diesel generators (DGs)[EK][DG] auto-started, as required, when the Diablo Canyon Power Plant (DCPP) startup bus[EA][BU] de-energized following the loss of 230kV transmission lines[FK][CBL] due to an offsite wildfire. On August 15, 1994, at 1828 PDT, a one-hour, non-emergency report was made to the NRC in accordance with 10 CFR 50.72(b)(1)(v), "loss of offsite response capability," to report that many of the early warning sirens were inoperable due to the wildfire. The four-hour, non-emergency report for this event was not made to the NRC within the time allowed due to a delay in updating Procedure XI1.ID2, "Regulatory Reporting Requirements and Reporting Process."

B. Background

Standby offsite power to DCPP is provided from two 230kV lines and can be provided from three 500kV lines when the DCPP main generator is not operating. Two of the 500kV lines feed the PG&E grid through the Midway substation, and the other 500kV line feeds the PG&E grid through the Gates substation. DCPP can be fed offsite power via the main and auxiliary transformers from these three 500kV sources. Two Morro Bay-to-Mesa substation 230kV lines feed DCPP via the startup transformers and are the principle sources of startup power. These two 230kV lines are fed from four operating units at Morro Bay power station and are capable of being fed from the two 230kV lines from the Gates substation or the two 230kV lines from the Midway substation (see Figure 1).

Interdepartmental Administrative Procedure (IDAP) XI1.ID2, "Regulatory Reporting Requirements and Reporting Process," Attachment 8.7, provides guidance on 10 CFR reporting. Item 9 of the attachment, Diesel Generators, indicated that a DG start due to loss of startup power was not considered an engineered safety feature (ESF) actuation.



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C. Event Description

On August 15, 1994, at 0439 PDT, the 500kV line to the Gates substation tripped due to a wildfire. At 0924 PDT, both Morro Bay-to-Gates substation 230kV lines tripped due to the wildfire, and Morro Bay Unit 3 tripped off line due to the system disturbances. Morro Bay Unit 2 was out of service for maintenance. The two 500kV lines from DCPD to Midway substation were in no immediate danger from the wildfire. However, PG&E reviewed applicable procedures and made plans for a complete loss of offsite power and reactor trips on both units in the event that the wildfire de-energized the other 500kV transmission lines.

On August 15, 1994, at 1704 PDT, the two 230kV lines between Morro Bay switchyard and the Midway substation tripped due to the wildfire. Morro Bay Units 1 and 4 tripped due to the system disturbance. Since all sources of 230kV power were lost, the Morro Bay 230kV switchyard was de-energized.

On August 15, 1994, at 1704 PDT, all six emergency DGs auto-started but did not load, as designed, following a loss of startup power when the 230kV Morro Bay-Midway transmission line de-energized.

On August 15, 1994, at 1740 PDT, all DGs were shutdown and returned to the auto-start mode with the startup bus undervoltage start defeated.

On August 15, 1994, at 1815 PDT, PG&E determined that the early warning sirens had become inoperable due to the loss of power from Morro Bay.

On August 15, 1994, at 1828 PDT, a one-hour, non-emergency report was made to the NRC in accordance with 10 CFR 50.72(b)(1)(v) for loss of offsite response capability. Loss of the Morro Bay-to-Mesa 230kV lines caused power outages in San Luis Obispo County. As a result, many of the early warning sirens were without power.

On August 15, 1994, at 2200 PDT, power was restored to the early warning sirens.

On August 15, 1994, at 2350 PDT, the DCPD startup bus and 230kV system were returned to service (declared operable) when the Morro Bay switchyard was re-energized from one of the Morro Bay-to-Gates 230kV transmission lines.

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On August 15, 1994, at approximately 2400 PDT, the Morro Bay-to-Midway 230kV lines were re-energized.

On August 16, 1994, at approximately 1100 PDT, after an engineering review of the control room turnover logs, PG&E determined that a 10 CFR 50.72 report was not made for the DG auto-starts. The event report was updated to include a four-hour, non-emergency report in accordance with 10 CFR 50.72(b)(2)(ii) for the auto-start of the DGs (ESF actuation).

D. Inoperable Structures, Components, or Systems that Contributed to the Event
None.

E. Dates and Approximate Times for Major Occurrences

1. August 15, 1994, at 1704 PDT: Discovery/Event date: Six DGs auto-started upon loss of the DCPD startup bus.
2. August 15, 1994, at 1815 PDT: Discovery date: PG&E determined that the early warning sirens had become inoperable due to the loss of power from Morro Bay.
3. August 15, 1994, at 1828 PDT: A one-hour, non-emergency report was made to the NRC in accordance with 10 CFR 50.72(b)(1)(v) for loss of offsite response capability.
4. August 15, 1994, at 2350 PDT: DCPD startup bus was declared operable when the 230kV system was re-energized.
5. August 16, 1994, at 1100 PDT: The 10 CFR 50.72 report was updated to include a four-hour, non-emergency report in accordance with 10 CFR 50.72(b)(2)(ii) for the auto-start of the DGs.

F. Other Systems or Secondary Functions Affected

Loss of the Morro Bay-to-Mesa 230kV lines caused power outages in San Luis Obispo County. As a result, many of the early warning sirens were without power.

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G. Method of Discovery

The auto-start of the six DGs was immediately apparent to plant operators due to alarms and indications received in the control room.

During a review of control room turnover logs, engineering personnel identified that the DG auto-starts had not been included in the 10 CFR 50.72 one-hour, non-emergency report.

H. Operators Actions

The DGs were secured and returned to normal standby mode with the loss of startup bus auto-start defeated.

PG&E reviewed applicable procedures and made plans for a complete loss of offsite power and reactor trips on both units in the event the wildfire de-energized the other 500kV transmission lines.

I. Safety System Responses

All six DGs started but did not load, as designed.

III. Cause of the Event

A. Immediate Cause

Loss of 230kV startup power from Morro Bay.

B. Root Cause

The loss of startup power occurred when an offsite wildfire caused the Morro Bay substation to isolate from the PG&E grid and Morro Bay Power Station.

The current draft revision of NUREG 1022 indicates that anticipatory DG auto-starts are not an ESF actuation. However, PG&E received informal guidance from the NRC to include anticipatory DG auto-starts as an ESF actuation. The late 10 CFR 50.72 report was due to an untimely revision of Procedure XI1.ID2 following a decision to conservatively implement this informal guidance.

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IV. Analysis of the Event

The DGs actuated and performed as designed during this event. Thus, the health and safety of the public were not affected by this event.

V. Corrective Actions

A. Immediate Corrective Actions

After startup power was returned, the DGs loss of startup power auto-start feature was reactivated.

Procedure XI1.ID2 was revised to include loss of startup power as a valid ESF actuation signal with regard to 10 CFR 50.72 reporting.

Most of the inoperable early warning sirens were made operable by re-energizing of the PG&E transmission system. Some sirens took up to 72 hours to repair due to fire damaged poles, lines, wiring, etc.

B. Corrective Actions to Prevent Recurrence

The DGs performed as required by design, therefore no corrective action for this event was determined to be necessary.

VI. Additional Information

A. Failed Components

None.

B. Previous LERs on Similar Problems

None.



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EVENT DATE AUGUST 15, 1994

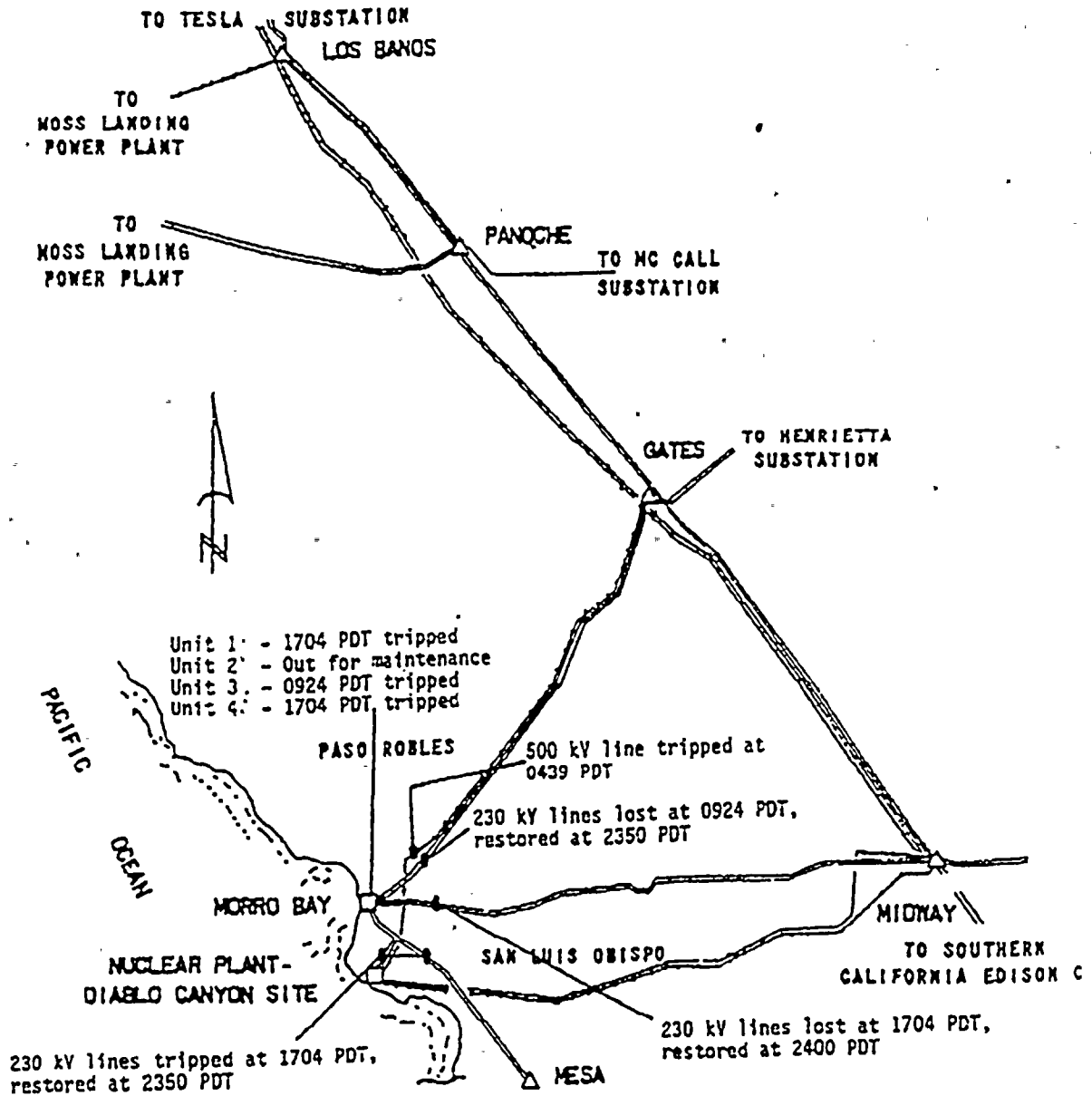


Figure 1

