Pacific Gas and Electric Company

Cary D. Harbor
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September 20, 2021

PG&E Letter DCL-21-065

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

10 CFR 50.73

Docket No. 50-323, OL-DPR-82
Diablo Canyon Power Plant, Unit 2
Unit 2 Licensee Event Report 2021-01-00, Emergency Diesel Generator Declared Inoperable due to Low Frequency Condition Discovery during Routine Surveillance

Dear Commissioners and Staff,

In accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(v)(D), Pacific Gas and Electric Company (PG&E) hereby submits the enclosed Diablo Canyon Power Plant (DCPP) Unit 2 Licensee Event Report regarding a low frequency condition found for one of the three Unit 2 Emergency Diesel Generators during a routine surveillance test.

PG&E makes no new or revised regulatory commitments (as defined by NEI 99-04) in this report. All corrective actions identified in this letter will be implemented in accordance with the DCPP Corrective Action Program.

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

If you have any questions or require additional information, please contact Mr. James Morris, Regulatory Services Manager, at (805) 545-4609.

Sincerely,

D.B. Peterson for C. Harbor
Cary Harbor

dqmg/51126111
Enclosure
cc/enc: Samson S. Lee, NRR Senior Project Manager
Scott A. Morris, NRC Region IV Administrator
Ayesha Athar, NRC Acting Senior Resident Inspector
INPO
Diablo Distribution

NRC FORM 366 (08-2020) | U.S. NUCLEAR REGULATORY COMMISSION | APPROVED BY OMB: NO. 3150-0104 | EXPIRES: 08/31/2023

LICENSEE EVENT REPORT (LER)

(See Page 3 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. Facility Name	2. Docket Number	3. Page
Diablo Canyon Power Plant, Unit 2	05000323	1 OF 3

4. Title
Emergency Diesel Generator Declared Inoperable due to Low Frequency Condition Discovery during Routine Surveillance

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved	
Month	Day	Year	Year	Sequential Number	Rev No.	Month	Day	Year	Facility Name	Docket Number
										05000
07	22	2021	2021	01	00	09	20	2021	Facility Name	Docket Number
										05000

9. Operating Mode	10. Power Level
1	100

11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: *(Check all that apply)*

10 CFR Part 20	☐ 20.2203(a)(2)(vi)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(A)	**10 CFR Part 73**
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.69(g)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(4)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(i)	**10 CFR Part 21**	☒ 50.73(a)(2)(i)(B)	☒ 50.73(a)(2)(v)(D)	☐ 73.77(a)(1)(i)
☐ 20.2203(a)(2)(ii)	☐ 21.2(c)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(i)
☐ 20.2203(a)(2)(iii)	**10 CFR Part 50**	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)	☐ 73.77(a)(2)(ii)
☐ 20.2203(a)(2)(iv)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)	
☐ 20.2203(a)(2)(v)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)	

☐ **Other** (Specify here, in Abstract, or in NRC 366A).

12. Licensee Contact for this LER

Licensee Contact	Phone Number (Include Area Code)
David Madsen	805-545-6192

13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable To IRIS	Cause	System	Component	Manufacturer	Reportable To IRIS
X	DC	DG	ALCO	N					

14. Supplemental Report Expected		15. Expected Submission Date	Month	Day	Year
☒ No	☐ **Yes** (If yes, complete 15. Expected Submission Date)				

16. Abstract (Limit to 1560 spaces, i.e., approximately 15 single-spaced typewritten lines)

On July 22, 2021, with Diablo Canyon Power Plant (DCPP) Unit 2, operating at 100 percent power, DCPP personnel determined that since June 30, 2021, Emergency Diesel Generator (EDG) 2-3 would not have been able to attain Technical Specification (TS) minimum frequency when started in automatic. Manual control of diesel frequency was not affected. This condition was discovered via a routine surveillance test which evaluates, in part, EDG frequency during standby and loading conditions.

This event is being reported pursuant to 10 CFR 50.73(a)(2)(i)(B) as an operation of the plant in a condition prohibited by DCPP TS due to the EDG frequency being outside TS required limits for a period beyond the TS required completion time. This event is also being reported pursuant to 10 CFR 50.73(a)(2)(v)(D) as an event or condition that could have prevented fulfillment of a safety function. However, upon discovery, the remaining two of the three EDGs were operable.

The condition was corrected and the EDG was restored to Operable status on July 22, 2021. A subsequent evaluation determined that the low frequency condition did not prevent EDG 2-3 from performing its specified safety function.

LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

(See NUREG-1022, R.3 for instruction and guidance for completing this form https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Diablo Canyon Power Plant, Unit 2	05000-323	2021	01	00

NARRATIVE

I. Reporting Requirements

This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B) and the associated guidance of NUREG-1022, Revision 3, as an operation or condition prohibited by Diablo Canyon Power Plant (DCPP) Technical Specifications (TS), due to the emergency diesel generator (EDG) frequency being outside TS required limits for a period beyond the associated TS required completion time.

This event is also being reported in accordance with 10 CFR 50.73(a)(2)(v)(D) as an event or condition that could have prevented fulfillment of a safety function. However, it should be noted that two of the three EDGs were operable at the time of discovery.

II. Plant Conditions

At the time of the event, DCPP Unit 2 was in Mode 1 at 100 percent power.

III. Problem Description

A. Background

DCPP Units 1 and 2 each have three EDGs. The safety function of the EDGs is to provide AC power to Engineered Safety Features (ESF) loads when offsite power is unavailable. The specified safety functions of EDG 2-3 are:

a. to furnish sufficient power to mitigate a design basis accident in one unit and safely bring DCPP to cold shutdown for the other unit when both offsite power sources are unavailable.

b. to furnish power sufficient for a controlled shutdown of the plant whenever the main turbine-generator and the offsite power sources are not available.

To satisfy these functions, the EDG 2-3 must be capable of automatically starting, accelerating to rated speed and voltage in under 10 seconds and connecting to its respective ESF Bus on detection of Bus undervoltage (UV).

B. Event Description

On July 22, 2021, with DCPP Unit 2, operating at 100 percent power, DCPP personnel determined that since June 30, 2021, EDG 2-3 would not have been able to attain TS minimum frequency when started in automatic. Manual control of diesel frequency was not affected.

On July 21, 2021, EDG 2-3 was started on a simulated UV signal for routine surveillance testing. The EDG was started with the mode select switch in the "AUTO" position which indicates the diesel was aligned for dedicated supply to its associated 4 KV vital electrical Bus. The frequency indicated 58.90 Hz and diesel speed indicated 880 revolutions per minute. Per the surveillance testing procedure, the frequency should have been between 59.5 Hz and 60.5 Hz (accounting for instrument uncertainty) on the start prior to any adjustments.

EDG 2-3 was placed in manual, the frequency and speed were adjusted into their proper band, and then the surveillance test was completed meeting all acceptance criteria. However, due to the frequency attained following the automatic UV start, EDG 2-3 was declared INOPERABLE.

The low frequency condition discovered during the routine surveillance procedure for EDG 2-3 was below the TS 3.8.1 lower limit of 59.5 Hz (accounting for instrument uncertainty). This non-conforming condition has been determined to exist between June 30, 2021 (previous successful EDG 2-3 surveillance) through July 22, 2021 (when restored to Operable status).

A subsequent evaluation determined EDG 2-3 and the equipment powered from its associated vital 4 KV and 480 V Buses were capable of performing their specified safety functions.

C. Method of Discovery

This condition was discovered via a routine surveillance test which monitors, in part, EDG frequency during standby and loading conditions.

D. Operator Actions

The condition was corrected and EDG 2-3 was restored to Operable status on July 22, 2021.

F. Safety System Responses

There are no safety system responses associated with this event.

IV. Cause of the Problem

The cause of the EDG 2-3 low frequency condition was due to an inadequately performed post maintenance test. The testing sequence did not fully consider the need for revalidation of frequency following setting of the EDG governor following maintenance activities.

V. Assessment of Safety Consequences

There were no safety consequences as a result of this event.

There was no impact on health and safety of the public or plant personnel.

VI. Corrective Actions

The condition was corrected and the EDG was restored to Operable status on July 22, 2021. Follow-up corrective actions to prevent recurrence will be managed in accordance with the DCPP Corrective Action Program.

VII. Additional Information

There have been no similar events for the EDGs at DCPP in the previous three years.