



PG&E Letter DCL-21-093

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 2021-002-00, Unit 2 Manual Reactor Trip Due to
Increased Water Level in a Feedwater Heater

Dear Commissioners and Staff,

In accordance with the requirements of 10 CFR 50.73(a)(2)(iv)(A), Pacific Gas and Electric Company (PG&E) hereby submits the enclosed Diablo Canyon Power Plant (DCPP) Unit 2 Licensee Event Report regarding a manual reactor trip due to increasing water level in Feedwater Heater (FWH) 2-5B.

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,

Cary D. Harbor

12/14/2021

Date

dqmg/51133409

Enclosure

cc/enc: Samson S. Lee, NRR Senior Project Manager
Scott A. Morris, NRC Region IV Administrator
Winston C. Smith, Acting NRC Senior Resident Inspector
INPO
Diablo Distribution



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/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Library, and Information Collections Branch (T-6 A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk ail: oir_submission@omb.eop.gov. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

1. Facility Name Diablo Canyon Power Plant, Unit 2	2. Docket Number 05000323	3. Page 1 OF 3
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4. Title Unit 2 Manual Reactor Trip Due to Increased Water Level in a Feedwater Heater

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
10	15	2021	2021	002	00	12	14	2021	Facility Name	05000
									Facility Name	05000

9. Operating Mode 1	10. Power Level 90
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11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

10 CFR Part 20	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.36(c)(2)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	10 CFR Part 73
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.69(g)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(4)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.71(a)(5)
<input type="checkbox"/> 20.2203(a)(2)(i)	10 CFR Part 21	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(1)(i)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 21.2(c)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(i)
<input type="checkbox"/> 20.2203(a)(2)(iii)	10 CFR Part 50	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 73.77(a)(2)(ii)
<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)	

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

12. Licensee Contact for this LER

Licensee Contact David Madsen	Phone Number (Include Area Code) 805-545-6192
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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
N/A	SB								

14. Supplemental Report Expected				15. Expected Submission Date		
<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (If yes, complete 15. Expected Submission Date)			Month	Day	Year

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

On October 15, 2021, at 17:49 Pacific Daylight Time, with Diablo Canyon Power Plant Unit 2 operating at 90 percent power, the reactor was manually tripped in accordance with plant procedures due to increasing water level in Feedwater Heater (FWH) 2-5B.

This event included actuation of the auxiliary feedwater system as expected following manual reactor trip.

This event is being reported per 10 CFR 50.73(a)(2)(iv)(A) due to a manual reactor trip and the associated automatic actuation of a specified safety system.

The cause of the increased feedwater level was due to failure of multiple tubes in the FWH.

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



**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
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1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Diablo Canyon Power Plant, Unit 2	05000323	2021	002	00

NARRATIVE

I. Reporting Requirements

This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A) and the associated guidance of NUREG-1022, Revision 3, due to a manual reactor trip and the subsequent automatic actuation of the auxiliary feedwater (AFW) system as expected.

This event was initially reported in Event Notification 55526 in accordance with the requirements of 10 CFR 50.72(b)(2)(iv)(B) as a manual actuation of the reactor protection system and 10 CFR 50.72(b)(3)(iv)(A) as an automatic actuation of a specified safety system.

II. Plant Conditions

At the time of the event, Diablo Canyon Power Plant (DCPP) Unit 2 was in Mode 1 at 90 percent power.

III. Problem Description

A. Background

The condensate system and main feedwater system (MFWS) are non-safety-related systems whose function is to supply preheated feedwater to the steam generators (SGs). These systems improve overall plant efficiency by regeneratively heating feedwater as it is pumped through low and high-pressure feedwater heaters (FWHs) prior to the entering the SGs. The condensate and MFWS are not required to ensure safe shutdown of the nuclear steam supply system.

The condensate and MFWS receive condensate from the main condenser hotwell and deliver it as feedwater to the SGs at the required pressure and temperature. Condensate is normally pumped to the main feedwater pump suction header through FWHs 2 through 6. Feedwater is then pumped through the tube sides of FWH 1. Extraction steam from the low and high-pressure turbines is piped to the shell sides of these feedwater heaters. All FWHs are horizontal type with three parallel heat exchangers comprising each level of FWH heating.

The AFW system is an engineered safety system that serves as a backup supply of feedwater to the secondary side of the SGs when the condensate and MFWS are not available, thereby maintaining the heat sink capabilities of the steam generators.

B. Event Description

On October 15, 2021, at 17:49 Pacific Daylight Time, with DCPP Unit 2 operating at 90 percent power, while diagnosing a potential tube leak in FWH 2-5B, the reactor was manually tripped in accordance with plant procedures due to increasing water level in the feedwater heater.



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CONTINUATION SHEET**

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

This event included actuation of the AFW system as expected following manual reactor trip. There were no inoperable Technical Specification structures, systems, or components that contributed to the event.

D. Method of Discovery

Increased water level in FWH 2-5B was validated by Operations personnel following the receipt of the associated control room annunciator.

E. Operator Actions

The Operations crews responded to this event in accordance with plant operating procedures.

F. Safety System Responses

The AFW system responded as expected following the manual reactor trip.

IV. Cause of the Problem

The cause of the water level increase was a result of multiple tube failures in FWH 2-5B.

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

FWH 2-5B was repaired and returned to service. The other two No. 5 FWHs (2-5A and 2-5C) were verified to exhibit no indication of leakage. Follow-up corrective actions to prevent recurrence will be managed in accordance with the DCCP Corrective Action Program.

VII. Additional Information

There have been no similar events at DCCP in the previous three years.