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 50-323 Diablo Canyon Nuclear Power Plant, Unit 2, Pacific Ga 05000323  
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 JOYCE, T.C. Pacific Gas & Electric Co.  
 TOWNSEND, J.D. Pacific Gas & Electric Co.  
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: Monthly operating repts for Mar 1991 for Diablo Canyon Units  
 1 & 2.W/910412 ltr.

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Pacific Gas and Electric Company

Diablo Canyon Power Plant  
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805/541-7616

John D. Townsend  
Vice President—Diablo Canyon Operations  
and Plant Manager

April 12, 1991



U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

RE: Docket No.. 50-275 and 50-323  
License No. DPR-80 and DPR-82  
Monthly Operating Report for March, 1991

Gentlemen:

Enclosed are the completed monthly operating report forms for  
Diablo Canyon Units 1 and 2 for March, 1991. This report is  
submitted in accordance with Section 6.9.1.7 of the Units 1  
and 2 Technical Specifications.

Sincerely,

A handwritten signature in cursive script, appearing to read 'John D. Townsend'. The signature is written in dark ink and is positioned above the typed name 'John D. Townsend'.

JDJ:pgd(4054).pcm

Enclosures

cc: Mr. John B. Martin, Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region V  
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Walnut Creek, CA 94596-5268

Liz Hannon, President  
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PDR ADOCK 05000275  
R PDR

Handwritten initials or a signature in the bottom right corner, possibly reading 'JE24' with a date '11' below it.



MONTHLY NARRATIVE REPORT  
OF OPERATION  
AND MAJOR MAINTENANCE EXPERIENCE

This report describes the operating and major maintenance experience for the month of March 1991. This narrative report was prepared by the Plant staff and is submitted in accordance with Section 6.9.1.7 of the Units 1 and 2 Technical Specifications (TS).

Narrative of Daily Significant Plant Events

- On March 1, 1991: Unit 1 started the month at 0% power and Unit 2 started the month ramping down to 50% power for condenser cleaning.
- On March 2, 1991: Unit 2 returned to 100% power.
- On March 3, 1991: Unit 1 entered Mode 6 (REFUELING); fuel reloading commenced.
- On March 7, 1991: A loss of offsite power to Unit 1 occurred when a mobile crane boom came too close to the 500 kV power lines. The 500 kV line arced to ground through the crane boom, and caused the loss of offsite power. The emergency diesel generators started and loaded to the vital buses, and offsite power was restored within five hours.

Three reports were made associated with this event as follows:

1. A 10 CFR 50.72(b)(2)(i) Non-Emergency 1 Hour report Unusual Event was made due to a loss of offsite power.
2. A 10 CFR 50.72(b)(2)(iii) Non-Emergency 4 Hour report was made regarding a momentary loss of RHR (less than 1 minute) due to the loss of power.
3. A 10 CFR 50.72(b)(2)(ii) Non-Emergency 4 Hour report was made regarding an unplanned Engineering Safety Feature (ESF) actuation - Control Room ventilation swapped to Mode 4 (pressurization) due to the loss of power.

For more information on these three reports, see (LER) 1-91-004.

Unit 1 fuel reloading complete.



On March 12, 1991: Unit 1 entered Mode 5 (COLD SHUTDOWN).

On March 15, 1991: A 10 CFR 50.72 (b)(2)(iv) Non-Emergency 4 Hour report was made regarding a spill of an estimated 50 gallons diesel fuel oil which was released at the DCPD fuel station when a fuel truck was inadvertently overfilled. Absorbent collars were immediately placed around the nearest storm drain; however, heavy rains washed a small amount of the fuel oil into another storm drain.

A minor sheen was then observed in the connecting drainage culvert which discharges into the surf zone of the ocean. No sheen was observed in the ocean.

On March 23, 1991: A 10 CFR 50.72 (b)(2)(ii) Non-Emergency 4 Hour report was made regarding an unplanned start of diesel generator 1-1 which was initiated when a non-licensed operator inadvertently actuated the wrong SSPS test switch. This event constitutes an engineering safety feature (ESF). Actuation of the test switch initiated an SSPS actuation which caused an unplanned start of diesel generator 1-1, and a realignment of the safety injection valves. The control room operators returned all activated equipment to normal. For more information on this report, see LER 1-91-005.

On March 26, 1991: A 10 CFR 50.72 (b)(2)(ii) Non-Emergency 4 Hour report was made regarding an unplanned containment ventilation isolation (CVI). For more information on this report see LER 1-91-006.

On March 27, 1991: Unit 1 entered Mode 4 (HOT SHUTDOWN).

On March 29, 1991: Unit 1 entered Mode 3 (HOT STANDBY).

On March 30, 1991: Unit 2 ramped down to 50% power for condenser cleaning.

On March 31, 1991: Unit 2 returned to 100% power.

On March 31, 1991: Unit 1 ended the month at 0% power (Mode 3) due to refueling outage and Unit 2 at 100% power.

#### Summary of Plant Operating Characteristics, Power Reductions and Unit Shutdowns

Unit 1 operated this month with a unit availability factor of 0.0% and a unit capacity factor of 0%. Unit 1 did not reduce power this month due to the refueling operations throughout this month.

Unit 2 operated this month with a unit availability factor of 100.0% and a unit capacity factor of 96.3%. Unit 2 reduced power twice this month for condenser cleaning.





### Summary of Significant Safety Related Maintenance

- o The Unit 1 ISI hydrostatic tests were completed thru 1R4.
- o Seventy Unit 1 snubbers were tested with no failures.
- o The Unit 1 steam generators were eddy current tested and one tube on S/G 1-3 was plugged.
- o Inspection of the Unit 1 letdown line revealed four inoperable snubbers and pipe supports. The four inoperable snubbers and pipe supports were replaced prior to mode 4 transition.
- o Feedwater regulating valve FW-2-FCV-520 was repaired, tested and returned to normal operation.
- o Unit 2 letdown line was weld repaired. This work included replacement of the "C" orifice, two butt welded 90 degree elbows, and rebuilding of two 90 degree socket welds. The letdown line tested satisfactorily following these repairs.
- o Overhaul and preventive maintenance was performed on various safety related motor operated valves, breakers and motors.

### Actuations of Steam Generator Safety Valves or Pressurizer Power Operated Relief Valves

None.



# OPERATING DATA REPORT

DOCKET NO. 50-275  
DATE 04/01/91  
COMPLETED BY T. C. Joyce  
TELEPHONE (805)545-4139

## OPERATING STATUS

1. Unit Name: Diablo Canyon Unit 1
2. Reporting Period: MARCH 1991
3. Licensed Thermal Power (MWt): 3338
4. Nameplate Rating (Gross MWe): 1137
5. Design Electrical Rating (Net MWe): 1086
6. Maximum Dependable Capacity (Gross Mew): 1124
7. Maximum Dependable Capacity (Net MWe): 1073.4
8. If changes occur in capacity ratings (Items Number 3 through 7) since last report, give reasons:  
N/A

9. Power Level To Which Restricted, If Any (Net MWe): N/A
10. Reasons For Restrictions, If Any: N/A

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	<u>744.0</u>	<u>2160.0</u>	<u>51718.3</u>
12. Number Of Hours Reactor Was Critical	<u>0.0</u>	<u>753.2</u>	<u>41870.3</u>
13. Reactor Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
14. Hours Generator On-Line	<u>0.0</u>	<u>753.1</u>	<u>41112.7</u>
15. Unit Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
16. Gross Thermal Energy Generated (MWH)	<u>0.0</u>	<u>2416883</u>	<u>127711355</u>
17. Gross Electrical Energy Generated	<u>0.0</u>	<u>813400</u>	<u>43003732</u>
18. Net Electrical Energy Generated	<u>-8206</u>	<u>759787</u>	<u>40739869</u>
19. Unit Service Factor	<u>0.0</u>	<u>34.9</u>	<u>79.5</u>
20. Unit Availability Factor	<u>0.0</u>	<u>34.9</u>	<u>79.5</u>
21. Unit Capacity Factor (Using MDC Net)	<u>-1.0</u>	<u>32.8</u>	<u>73.4</u>
22. Unit Capacity Factor (Using DER Net)	<u>-1.0</u>	<u>32.4</u>	<u>72.5</u>
23. Unit Forced Outage Rate	<u>0.0</u>	<u>4.9</u>	<u>4.0</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

None

25. If Shut Down At End Of Report Period, Estimated Date of Startup: N/A



# OPERATING DATA REPORT

DOCKET NO. 50-323  
DATE 04/01/91  
COMPLETED BY T. C. Joyce  
TELEPHONE (805) 545-4139

## OPERATING STATUS

1. Unit Name: Diablo Canyon Unit 2
2. Reporting Period: MARCH 1991
3. Licensed Thermal Power (MWt): 3411
4. Nameplate Rating (Gross MWe): 1164
5. Design Electrical Rating (Net MWe): 1119
6. Maximum Dependable Capacity (Gross MWe): 1137
7. Maximum Dependable Capacity (Net MWe): 1087
8. If changes occur in capacity ratings (Items Number 3 through 7) since last report, give reasons:  
N/A
9. Power Level To Which Restricted, If Any (Net MWe): N/A
10. Reasons For Restrictions, If Any: N/A

	This Month	Year to Date	Cumulative
11. Hours in Reporting Period	<u>744.0</u>	<u>2160.0</u>	<u>44277.0</u>
12. Number Of Hours Reactor Was Critical	<u>744.0</u>	<u>2160.0</u>	<u>36836.0</u>
13. Reactor Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
14. Hours Generator On-Line	<u>744.0</u>	<u>2160.0</u>	<u>36093.0</u>
15. Unit Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
16. Gross Thermal Energy Generated	<u>2477147</u>	<u>7021369</u>	<u>116799424</u>
17. Gross Electrical Energy Generated	<u>817400</u>	<u>2314300</u>	<u>38877499</u>
18. Net Electrical Energy Generated	<u>778505</u>	<u>2206457</u>	<u>36877529</u>
19. Unit Service Factor	<u>100.0</u>	<u>100.0</u>	<u>81.5</u>
20. Unit Availability Factor	<u>100.0</u>	<u>100.0</u>	<u>81.5</u>
21. Unit Capacity Factor (Using MDC Net)	<u>96.3</u>	<u>94.0</u>	<u>76.8</u>
22. Unit Capacity Factor (Using DER Net)	<u>93.5</u>	<u>91.3</u>	<u>74.4</u>
23. Unit Forced Outage Rate	<u>0.0</u>	<u>0.0</u>	<u>5.6</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each)			

Refueling Outage - September 15, 1991, 63 days.

25. If Shut Down At End Of Report Period, Estimated Date of Startup: N/A



# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-275  
UNIT 1  
DATE 04/01/91  
COMPLETED BY T. C. JOYCE  
TELEPHONE (805) 545-4139

MONTH: MARCH 1991

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	-4	16	-3
2	-6	17	-3
3	-6	18	-3
4	-5	19	-3
5	-4	20	-3
6	-3	21	-4
7	-1	22	-4
8	-2	23	-4
9	-4	24	-14
10	-3	25	-17
11	-3	26	-17
12	-3	27	-38
13	-3	28	-42
14	-3	29	-43
15	-3	30	-46
		31	-46

## INSTRUCTIONS:

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

The average monthly electrical power level for March 1991 = 11 MWe-Net





# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-323  
UNIT 2  
DATE 4/01/91  
COMPLETED BY T. C. JOYCE  
TELEPHONE (805) 545-4139

MONTH: MARCH 1991

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	1050	16	1084
2	648	17	1072
3	1075	18	1076
4	1074	19	1076
5	1076	20	1080
6	1072	21	1076
7	1079	22	1077
8	1070	23	1078
9	1072	24	1077
10	1076	25	1077
11	1072	26	1076
12	1076	27	1072
13	1077	28	1072
14	1072	29	1072
15	1076	30	1048
		31	661

## INSTRUCTIONS:

On this format, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

The average monthly electrical power level for March 1991 = 1046 MWe-Net



UNIT SHUTDOWNS AND POWER REDUCTIONS  
Page 1 of 1

DOCKET NO. 50-275  
UNIT NAME Diablo Canyon Unit 1  
DATE 04/01/91  
COMPLETED BY P.G. DAHAN  
TELEPHONE (805) 545-4054

REPORT MONTH MARCH 1991

No.	Date	1 Type	Duration (Hours)	2 Reason	Method of 3 Shutdown	Licensee Event Report #	System 4 Code	Component 5 Code	Cause & Corrective Action to Prevent Recurrence
1.	910301	S	744.0	C	1	N/A	AB	RCT	Unit 1 was shutdown continuing the refueling outage (1R4) from the previous month.

1 Type: F-Forced S-Scheduled	2 Reason: A-Equipment Failure (Explain) B-Maintenance or Test C-Refueling D-Regulatory Restriction E-Operator Training & License Examination F-Administrative G-Operational Error (Explain) H-Other (Explain)	3 Method: 1-Manual 2-Manual Scram 3-Automatic Scram 4-Continuation from previous month 5-Power reduction 6,7,8-N/A 9-Other	4 Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-1022)	5 Exhibit I - Same Source
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UNIT SHUTDOWNS AND POWER REDUCTIONS  
Page 1 of 1

DOCKET NO. 50-323  
UNIT NAME Diablo Canyon Unit 2  
DATE 04/01/91  
COMPLETED BY P.G. DAHAN  
TELEPHONE (805) 545-4054

REPORT MONTH MARCH 1991

No.	Date	1 Type	Duration (Hours)	2 Reason	Method of 3 Shutdown	Licensee Event Report #	System 4 Code	Component 5 Code	Cause & Corrective Action to Prevent Recurrence
1	910301	S	0	B	1	N/A	SD	COND	Unit 2 ramped down to 50% power for condenser cleaning.
2	910330	S	0	B	1	N/A	SD	COND	Unit 2 ramped down to 50% power for condenser cleaning.
1	Type:				Reason:			3	Method:
	F-Forced				A-Equipment Failure (Explain)				1-Manual
	S-Scheduled				B-Maintenance or Test				2-Manual Scram
					C-Refueling				3-Automatic Scram
					D-Regulatory Restriction				4-Continuation from previous month
					E-Operator Training & License Examination				5-Power reduction
					F-Administrative				6,7,8-N/A
					G-Operational Error (Explain)				9-Other
					H-Other (Explain)				
								4	Exhibit G - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-1022)
								5	Exhibit I - Same Source



DATE: 04/01/91

REFUELING INFORMATION REQUEST

1. Name of facility: Diablo Canyon Unit 1
2. Scheduled date for next refueling shutdown: September 1992 (estimated)
3. Scheduled date for restart following refueling: November 1992 (estimated)
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? If answer is yes, what, in general, will there be? If answer is no, has the reload fuel design and core configuration been reviewed by your Plant Safety Review Committee to determine whether any unreviewed safety questions are associated with the core reload (Ref. 10 CFR Section 50.59)? If no such review has taken place, when is it scheduled?

No.

5. Scheduled date(s) for submitting proposed licensing action and supporting information:

N/A

6. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:

N/A

7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool:

(a) 193 (b) 288

8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned, in number of fuel assemblies:

Present 1324 Increase size by 0

9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity:

Date: 2012 (Loss of full core off-load capability)





DATE: 04/01/91

REFUELING INFORMATION REQUEST

1. Name of facility: Diablo Canyon Unit 2
2. Scheduled date for next refueling shutdown: September 1991 (estimated)
3. Scheduled date for restart following refueling: December 1991 (estimated)
4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment? If answer is yes, what, in general, will there be? If answer is no, has the reload fuel design and core configuration been reviewed by your Plant Safety Review Committee to determine whether any unreviewed safety questions are associated with the core reload (Ref. 10 CFR Section 50.59)? If no such review has taken place, when is it scheduled?

No. The PSRC is scheduled to review the cycle 5 core reload in  
September 1991 (estimated).

5. Scheduled date(s) for submitting proposed licensing action and supporting information:

N/A

6. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:

N/A

7. The number of fuel assemblies (a) in the core and (b) in the spent fuel storage pool:

(a) 193 (b) 224

8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned, in number of fuel assemblies:

Present 1324 Increase size by 0

9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity:

Date: 2012 (Loss of full core off-load capability)

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