

NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-361
UNIT SONGS - 2
DATE May 15, 1985
COMPLETED BY M. J. Farrell
TELEPHONE (714) 492-7700
Ext. 56739

OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 2
2. Reporting Period: _____
3. Licensed Thermal Power (MWt): 3390
4. Nameplate Rating (Gross MWe): 1127
5. Design Electrical Rating (Net MWe): 1070
6. Maximum Dependable Capacity (Gross MWe): 1127
7. Maximum Dependable Capacity (Net MWe): 1070
8. If Changes Occur In Capacity Ratings (Items Number 3 Through 7)
Since Last Report, Give Reasons: _____

NA

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

NA

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	719	2,879	14,928
12. Number Of Hours Reactor Was Critical	264.27	264.27	7,909.49
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	242.88	242.88	7,736.35
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	324,204.50	324,204.50	24,596,907.80
17. Gross Electrical Energy Generated (MWH)	109,116.00	109,116.00	8,319,424.50
18. Net Electrical Energy Generated (MWH)	77,762.00	57,480.00	7,822,428.00
19. Unit Service Factor	33.78	8.44	51.82
20. Unit Availability Factor	33.78	8.44	51.82
21. Unit Capacity Factor (Using MDC Net)	10.11	1.87	48.97
22. Unit Capacity Factor (Using DER Net)	10.11	1.87	48.97
23. Unit Forced Outage Rate	24.23	24.23	4.77
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):	NA		

25. If Shut Down At End Of Report Period, Estimated Date of Startup: NA
26. Units In Test Status (Prior To Commercial Operation): Forecast Achieved

INITIAL CRITICALITY
INITIAL ELECTRICITY
COMMERCIAL OPERATION

NA	NA
NA	NA
NA	NA

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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-361

UNIT SONGS - 2

DATE May 15, 1985

COMPLETED BY M. J. Farrell

TELEPHONE (714) 492-7700
Ext. 56739

MONTH April 1985

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	0
18	27.81
19	109.29
20	0
21	335.75
22	477.58
23	494.04
24	487.25
25	0
26	0
27	395.42
28	484.17
29	457.42
30	721.33
31	NA

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH APRIL 1985

DOCKET NO. 50-361
 UNIT NAME SONGS - 2
 DATE May 15, 1985
 COMPLETED BY M. J. Farrel
 TELEPHONE (714) 492-7700

No.	Date	¹ Type	Duration (Hours)	² Reason	³ Method of Shutting Down Reactor	LER No.	System ⁴ Code	Component ⁴ Code	Cause & Corrective Action to Prevent Recurrence
9	841020	S	398.45	C	4	NA	NA	NA	Refueling
10	850419	F	34.53	A	3	85-028	SB	RG	Unit trip due to MSIV 2HV-8205 failing closed due to loss of nitrogen pressure on the hydraulic dump valve actuators. Pressure regulator PCV-8205D replaced.
11	850425	F	43.14	B	1	NA	NA	NA	Power reduced and turbine tripped to replace leaking control valves of MSIV 2HV-8204 and to reposition turbine balance weight. Marotta control valves replaced.

¹	²	³	⁴
F-Forced S-Scheduled	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)	Method: 1-Manual 2-Manual Scram. 3-Automatic Scram. 4-Continuation from Previous Month 5-Reduction of 20% or greater in the past 24 hours 9-Other (Explain)	IEEE Std 803-1983

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO. 50-361

UNIT SONGS - 2

DATE May 15, 1985

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<u>Date</u>	<u>Time</u>	<u>Event</u>
April 1,	0001	The unit is in Mode 4, day 132 of refueling/design change outage.
April 1,	2315	Entered Mode 3 to conduct hydrostatic testing at 2295 psia.
April 3,	0536	Entered Mode 4.
April 8,	0550	Entered Mode 3.
April 12,	0325	Entered Mode 2.
April 12,	0650	Reactor critical.
April 14,	0140	Entered Mode 3 by manual reactor trip for physics test, per procedure S023-V-1.0.4
April 14,	0445	Entered Mode 2.
April 14,	0510	Reactor critical.
April 16,	0833	Reactor trip on low DNBR due to CPC projected temperature difference between RCS cold legs.
April 17,	0120	Entered Mode 1
April 17,	1427	Synchronized to the grid and applied block load.
April 19,	1227	Reactor trip due to Main Steam Injection Valve 2HV-8205 drifting closed. Unit entered Mode 3.
April 20,	1203	Entered Mode 2.
April 20,	1210	Reactor critical.
April 20,	2052	Entered Mode 1.
April 20,	2256	Synchronized to the grid and applied block load.
April 25,	0235	Unit power reduction to replace leaking control valves, perform associated maintenance items on MSIV 2HV-8204 and turbine generator balance weight adjustment.

APRIL 1985 (Continued)
Unit 2

(Continued)

<u>Date</u>	<u>Time</u>	<u>Event</u>
April 25,	0303	Entered Mode 2.
April 26,	2015	Entered Mode 1.
April 26,	2143	Synchronized to the grid and applied block load.
April 30,	2359	The Unit is in Mode 1 at 95% reactor power and 1100 MWe.

REFUELING INFORMATION

DOCKET NO. 50-361

UNIT SONGS - 2

DATE May 15, 1985

COMPLETED BY M. J. Farrell

TELEPHONE (714) 492-7700
Ext. 56739

1. Scheduled date for next refueling shutdown.

April, 1986

2. Scheduled date for restart following refueling.

July, 1986

3. Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment?

Not yet determined.

What will these be?

Not yet determined.

4. Scheduled date for submitting proposed licensing action and supporting information.

Not yet determined.

5. 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.

Not yet determined.

6. The number of fuel assemblies.

a) In the core. 217

b) In the spent fuel storage pool. 72

7. Licensed spent fuel storage capacity. 800

Intended change in spent fuel storage capacity. NA

8. Projected date of last refueling that can be discharged to spent fuel storage pool assuming present capacity.

Approximately 1997.

NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-362
UNIT NAME SONGS - 3
DATE May 15, 1985
COMPLETED BY M. J. Farrell
TELEPHONE (714) 492-7700
Ext. 56739

OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 3
2. Reporting Period: April 1985
3. Licensed Thermal Power (Mwt): 3390
4. Nameplate Rating (Gross MWe): 1127
5. Design Electrical Rating (Net MWe): 1080
6. Maximum Dependable Capacity (Gross MWe): 1127
7. Maximum Dependable Capacity (Net MWe): 1080
8. If Changes Occur In Capacity Ratings (Items Number 3 Through 7)
Since Last Report, Give Reasons:

NA

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

NA

NA

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	719	2,879	9,479
12. Number Of Hours Reactor Was Critical	584.28	1,533.06	5,953.23
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	565.03	1,457.03	5,562.98
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,798,082.40	4,657,191.60	17,718,780.04
17. Gross Electrical Energy Generated (MWH)	593,926.00	1,560,305.50	5,927,137.00
18. Net Electrical Energy Generated (MWH)	559,335.00	1,453,596.00	5,553,966.00
19. Unit Service Factor	78.59	50.61	58.69
20. Unit Availability Factor	78.59	50.61	58.69
21. Unit Capacity Factor (Using MDC Net)	72.03	46.75	54.25
22. Unit Capacity Factor (Using DER Net)	72.03	46.75	54.25
23. Unit Forced Outage Rate	10.45	47.80	20.31
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): Refueling, August, 1985, 110 days duration.			

25. If Shut Down At End Of Report Period, Estimated Date of Startup: N/A
26. Units In Test Status (Prior To Commercial Operation):

Forecast

Achieved

INITIAL CRITICALITY
INITIAL ELECTRICITY
COMMERCIAL OPERATION

NA

NA

NA

NA

NA

NA

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-362

UNIT SONGS - 3

DATE May 15, 1985

COMPLETED BY M. J. Farrell

TELEPHONE (714) 492-7700
Ext. 56739

MONTH April 1985

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	1,088.54
2	1,087.83
3	1,086.50
4	184.50
5	97.00
6	359.50
7	662.21
8	944.21
9	0
10	378.58
11	1,074.04
12	1,069.50
13	1,065.08
14	1,083.04
15	1,082.21
16	1,052.17

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	1,058.79
18	1,078.88
19	1,051.67
20	1,071.92
21	1,078.54
22	1,082.79
23	1,084.71
24	1,081.79
25	1,076.29
26	1,069.67
27	420.96
28	0
29	0
30	0
31	NA

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH APRIL 1985

DOCKET NO. 50-352

UNIT NAME SONGS - 3

DATE May 15, 1985

COMPLETED BY M. J. Farrell

TELEPHONE (714) 492-7700

Ext. 56739

No.	Date	Type	Duration (Hours)	Reason	Method of Shutting Down Reactor	LER No.	System Code	Component Code	Cause & Corrective Action to Prevent Recurrence
15	850404	F	29.30	A	3	85-012	JC	IT	Unit tripped due to faulty circuit board in turbine governor control system. Circuits were tested satisfactorily.
16	850408	F	36.67	A	3	85-013	TI	PSF	Unit tripped due to a broken sensing line on the hydrogen gas/seal oil regulator on main generator sealing. Replaced faulty fitting.
17	850427	S	88.00	B	1	NA	NA	NA	Initiated outage to repair 3TV-0021 which was cause of reactor coolant leak into the reactor coolant drain tank.

1	2	3	4
F-Forced S-Scheduled	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)	Method: 1-Manual 2-Manual Scram. 3-Automatic Scram. 4-Continuation from Previous Month 5-Reduction of 20% or greater in the past 24 hours 9-Other (Explain)	4 IEEE Std 803-1983

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO. 50-362

UNIT SONGS - 3

DATE May 15, 1985

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TELEPHONE (714) 492-7700
Ext. 56739

<u>Date</u>	<u>Time</u>	<u>Event</u>
April 1,	0001	Unit is in Mode 1 at 100% reactor power and 1137 MWe gross.
April 4,	0452	Reactor trip occurred due to faulty circuit board in L017 of the turbine governor control system.
April 5,	0430	Entered Mode 2.
April 5,	0452	Reactor critical.
April 5,	0655	Entered Mode 1.
April 5,	1010	Synchronized generator and applied block load. Power will be restrained at 45% for evaluation and observation of the turbine governor control system.
April 7,	2030	Unit returned to 100% power.
April 8,	2100	Turbine and reactor tripped due to a broken sensing line on the hydrogen gas/seal oil regulator in the main generator.
April 10,	0127	Entered Mode 2.
April 10,	0140	Reactor critical.
April 10,	0520	Entered Mode 1.
April 10,	0940	Synchronized generator and applied block load.
April 10,	2245	Unit achieved 100% reactor power.
April 12,	2000	Commenced power decrease to perform turbine stop and governor valve testing.
April 13,	0530	Raised reactor power to 100% following completion of turbine valve testing.
April 16,	1318	Initiated load reduction to 92% power to investigate main turbine governor control valve, 3UV-2200F, shutting.

APRIL 1985 (Continued)

Unit 3

(continued)

<u>Date</u>	<u>Time</u>	<u>Event</u>
April 17,	0557	Unit returned for full power following 3UV-2204 repairs.
April 17,	1410	Unit load reduced to 97% power due to high motor current condition on 3UV-2200F.
April 17,	2115	Unit at 100% reactor power.
April 19,	1935	Commenced power reduction to 90% for turbine stop and governor valve testing.
April 19,	2234	Completed stop valve testing and initiated power increase to 100%.
April 20,	1530	Unit at 100% power.
April 26,	2230	Commenced power reduction for weekly turbine stop and governor valve testing.
April 27,	0105	Completed turbine stop and governor valve testing.
April 27,	0700	Commenced power reduction for repair outage of 3TV-0021 which is causing a reactor coolant system leak to the reactor coolant drain tank.
April 27,	2035	Entered Mode 4.
April 30,	0600	Initiated power increase to Mode 3 following 3TV-0221 repairs.
April 30,	0638	Entered Mode 3.
April 30,	1747	Entered Mode 2.
April 30,	1803	Reactor critical.
April 30,	2103	Entered Mode 1.
April 30,	2359	Unit is in Mode 1 at 20% reactor power. Full power operations are planned.

REFUELING INFORMATION

DOCKET NO. 50-362

UNIT SONGS - 3

DATE May 15, 1985

COMPLETED BY M. J. Farrell

TELEPHONE (714) 492-7700
Ext. 56739

1. Scheduled date for next refueling shutdown.

August, 1985

2. Scheduled date for restart following refueling.

December, 1985

3. Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment?

Yes

What will these be?

Not yet determined.

4. Scheduled date for submitting proposed licensing action and supporting information.

Proposed Technical Specification change regarding required boric acid volume and concentration (PCN Number 163) was submitted March 9, 1985.

5. 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.

None. Reload analysis is the same as Unit 2.

6. The number of fuel assemblies.

a) In the core. 217

b) In the spent fuel storage pool. 0

7. Licensed spent fuel storage capacity. 800

Intended change in spent fuel storage capacity. NA

8. Projected date of last refueling that can be discharged to spent fuel storage pool assuming present capacity.

NA

ENCLOSURE 1

DESCRIPTION OF CHALLENGE TO
SAFETY VALVES (UNIT 2)

On April 19, 1985, at 1224, with Unit 2 in Mode 1 at 50% power, the reactor tripped in response to low Departure from Nucleate Boiling Ratio (DNBR) trip signals from the Core Protection Calculators (CPCs). The low DNBR trip signals were generated when the CPCs projected a low temperature difference of 18 degrees between cold legs following main steam isolation valve 2HV-8205 failing shut.

During stabilization of the plant, pressure in the secondary side of Steam Generator (S/G) E-088 associated with MSIV HV-8205 was controlled by the Steam Bypass Control System (SBCS). Secondary side pressure was observed to have increased to 1109 psia. There are nine safety valves per main steam line, the first is set to open at 1100 psia with succeeding valves opening one per additional seven psia. In this steam line, PSV-8401 is the first valve set to open at 1100 psia, and PSV-8402 is the second valve set to open at 1107 psia. However, it was observed that PSV-8402 was the safety valve that opened first instead of PSV-8401. Considering the allowed tolerances in main steam safety valve lift set points (+1%), it is not unusual for PSV-8402 (1107 psia set point) to open before PSV-8401 (1100 psia set point).

This report is submitted pursuant to 6.9.1.10 of Appendix A, Technical Specifications to Facility Operating License NPF-10 for San Onofre Unit 2. Although this incident is not reportable as a violation of Technical Specification 3.7.1.1, the safety valves were challenged since secondary side pressure reached 1109 psia.

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Southern California Edison Company

SAN ONOFRE NUCLEAR GENERATING STATION

P.O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

SCE

J. G. HAYNES
STATION MANAGER

TELEPHONE
(714) 492-7700

May 15, 1985

Director
Office of Management Information and
Program Analysis
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

Subject: Docket Nos. 50-361/50-362
Monthly Operating Reports for March 1985
San Onofre Nuclear Generating Station, Units 2 and 3

Enclosed are the Monthly Operating Reports as required by Section 6.9.1.10 of Appendix A, Technical Specifications to Facility Operating Licenses NPF-10 and NPF-15 for San Onofre Nuclear Generating Station, Units 2 and 3, respectively.

Also enclosed is a Description of Challenge to Safety Valves for Unit 2.

Please contact us if we can be of further assistance.

Sincerely,

JG Haynes

Enclosures

cc: J. B. Martin (Regional Administrator, USNRC Region V)

F. R. Huey (USNRC Senior Resident Inspector, Units 1, 2 and 3)
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)

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