

# NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-362  
UNIT SONGS - 2  
DATE April 13, 1984  
COMPLETED BY L. I. Mayweather  
TELEPHONE (714) 492-7700  
Ext. 56223

## OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 2
2. Reporting Period: 1 March 1984 through 31 March 1984
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

NA

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	2,184	5,689
12. Number Of Hours Reactor Was Critical	641.1	1,303.4	3,916.1
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	618.8	1,229.2	3,790.9
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,991,958	3,902,624	12,396,159
17. Gross Electrical Energy Generated (MWH)	683,114	1,334,581	4,246,546
18. Net Electrical Energy Generated (MWH)	646,281	1,251,712	4,027,357
19. Unit Service Factor	83.27	56.31	66.65
20. Unit Availability Factor	83.27	56.31	56.31
21. Unit Capacity Factor (Using MDC Net)	81.18	53.56	66.61
22. Unit Capacity Factor (Using DER Net)	81.18	53.56	66.61
23. Unit Forced Outage Rate	16.73	11.26	16.08
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

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-361

UNIT SONGS - 2

DATE April 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700  
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MONTH March 1984

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1	1117.92
2	1083.33
3	1116.67
4	1106.88
5	1095.42
6	1111.65
7	1091.48
8	1109.06
9	904.98
10	0
11	0
12	0
13	482.52
14	1112.81
15	1106.88
16	1078.33

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17	953.19
18	1091.71
19	1093.08
20	1085.56
21	1098.38
22	1052.73
23	1077.33
24	835.25
25	0
26	44.75
27	827.75
28	1091.06
29	1125.08
30	1096.71
31	1104.58

## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH MARCH, 1984

DOCKET NO. 50-361

UNIT NAME SONGS - 2

DATE April 13, 1984

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TELEPHONE (714) 492-7700

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No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	LER No.	System <sup>4</sup> Code	Component <sup>4</sup> Code	Cause & Corrective Action to Prevent Recurrence
3	840309	F	82.8	H	1	84-016	JE	N/A	Inadvertent SIAS, CCAS and CSAS actuation due to error while performing surveillance testing. Reactor was manually tripped. Procedural changes were made in restoration steps of surveillance procedure.
4	840324	F	42.4	A	3	84-019	JC	CPU	Reactor and turbine trip due to Low DNBR on all 4 CPCs. CEAC #1 transmitted incorrect rod position to the CPCs.

1  
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-Reduction of 20%  
or greater in the  
past 24 hours  
9-Other (Explain)

4  
IEEE Std 803-1983

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# SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO. 50-361

UNIT SONGS - 2

DATE April 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700  
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<u>Date/Time</u>	<u>Event</u>
March 1, 0001	Unit is in Mode 1 at 100% reactor power, turbine load is 1166 MWe gross. Full power operations are planned.
March 9, 1933	Received SIAS, CCAS and CSAS actuation due to personnel error in performance of plant protection system (PPS) matrix testing.
March 9, 1951	Tripped reactor due to rapid insertion of boric acid into the RCS resulting from the SIAS actuation. Commenced containment cleanup and inspection as a result of the containment spray actuation.
March 12, 1245	Entered Mode 2 following completion of containment cleanup.
March 12, 1300	Reactor critical.
March 13, 0118	Entered Mode 1.
March 13, 0640	Synchronized generator and applied block load of 55 MWe gross.
March 13, 2100	Attained 100% reactor power and 1164 MWe gross turbine load.
March 17, 0305	Decreased reactor power to 90% and turbine load to ~ 1050 MWe gross to perform a heat treatment, and turbine stop and governor valve testing.
March 17, 0615	Completed turbine valve testing.
March 17, 1755	Completed heat treatment.
March 17, 2100	Attained 100% reactor power and 1135 MWe gross turbine load.
March 24, 0855	Reduced reactor power to 80% to perform turbine stop and governor valve testing.

<u>Date/Time</u>	<u>Event</u>
March 24, 1400	Completed turbine valve testing and commenced power increase to 100%.
March 24, 1934	Reactor and turbine tripped from 100% reactor power due to Low DNBR on all 4 CPC Channels. The trip was caused by CEAC #1 transmitting an incorrect rod position to the CPCs which resulted in a significant rod deviation penalty factor.
March 26, 0230	Completed repairs and testing of CEAC #1.
March 26, 0520	Entered Mode 2.
March 26, 0534	Reactor critical.
March 26, 0635	Reactor tripped on high steam generator water level.
March 26, 1007	Entered Mode 2.
March 26, 1020	Reactor critical.
March 26, 1130	Entered Mode 1.
March 26, 1355	Synchronized generator and applied block load.
March 27, 1257	Attained 100% reactor power and 1164 MWe gross turbine load.
March 27, 1510	HP governor valve UA2200C closed due to oil pump failure. Reduced reactor power to 93%.
March 27, 1542	HP stop valve UA2200H closed. Reduced reactor power to 72% and turbine load to ~ 800 MWe gross.
March 27, 1700	Opened UA2200C and UA2200H following maintenance and commenced power increase.
March 27, 2225	Attained 100% reactor power and 1158 MWe gross turbine load.
March 30, 1726	Decreased turbine load to ~ 1050 MWe gross to perform turbine stop and governor valve testing.
March 30 2127	Completed turbine valve testing and commenced power increase.
March 31 0045	Attained 100% reactor power and 1158 MWe gross turbine load.
March 31 2359	Unit is in Mode 1 at 100% reactor power, turbine load is 1158 MWe gross. Full power operations are planned.

## REFUELING INFORMATION

DOCKET NO. 50-361

UNIT SONGS - 2

DATE April 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700  
Ext. 56223

1. Scheduled date for next refueling shutdown.

September 1984

2. Scheduled date for restart following refueling.

December 1984

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

Yes

What will these be?

Proposed Technical Specification changes will be submitted to the NRC for Shutdown Cooling System Modifications (Proposed Change Number (PCN) 126), for the reload analysis (PCN 147-153), for inclusion of heated junction thermocouples (PCN 128), and for Steam Generator tube wall thinning criteria (PCN 141).

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. 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.

Approximately 1997.



# NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-362  
UNIT NAME SONGS - 3  
DATE April 13, 1984  
COMPLETED BY L. I. Mayweather  
TELEPHONE (714) 492-7700  
Ext. 56223

## OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 3
2. Reporting Period: 1 March 1984 through 31 March 1984
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):

NA

10. Reasons For Restrictions, If Any:

NA

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744	2184	4518
12. Number Of Hours Reactor Was Critical	532.7	675.5	2754.7
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	481.5	604.5	2248.2
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,415,800	1,831,541	5,380,410
17. Gross Electrical Energy Generated (MWH)	461,630	601,856	1,700,144
18. Net Electrical Energy Generated (MWH)	427,860	549,306	1,546,364
19. Unit Service Factor	NA	NA	NA
20. Unit Availability Factor	NA	NA	NA
21. Unit Capacity Factor (Using MDC Net)	NA	NA	NA
22. Unit Capacity Factor (Using DER Net)	NA	NA	NA
23. Unit Forced Outage Rate	NA	NA	NA
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

-

8/29/83

-

9/25/83

4/1/84

4/1/84

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-362

UNIT SONGS - 3

DATE April 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700  
Ext. 56223

MONTH March 1984

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	201.60
9	582.83
10	781.60
11	0
12	0
13	638.19
14	602.67
15	801.31
16	1091.31

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

17	1122.75
18	1083.79
19	1115.69
20	1101.56
21	1095.35
22	1106.10
23	1087.94
24	1101.84
25	1087.65
26	1086.04
27	1066.67
28	1037.27
29	965.96
30	3.10
31	0



## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH FEBRUARY, 1984

DOCKET NO. 50-362

UNIT NAME SONGS - 3

DATE April 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700

Ext. 56223

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	LER No.	System Code <sup>4</sup>	Component Code <sup>4</sup>	Cause & Corrective Action to Prevent Recurrence
1	840106	S	166.8	B	4	NA	NA	NA	Continuation of surveillance outage.
2	840310	F	50.6	H	3	84-008	BA	NA	Reactor trip due to loss of load turbine trip caused by low condenser vacuum.
3	840330	S	45.1	B	1	NA	NA	NA	Scheduled outage.

1  
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-Reduction of 20%  
or greater in the  
past 24 hours  
9-Other (Explain)

4 IEEE Std 803-1983

2941u

## SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

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DATE April 13, 1984

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<u>Date/Time</u>	<u>Event</u>
March 1, 0001	Unit is in Mode 5 at 183 F and continues in a surveillance outage. Repairs are underway to correct valve binding problems on 3HV-9327.
March 2, 0248	Entered Mode 4 following repairs to 3HV-9327.
March 4, 0955	Entered Mode 3.
March 7, 0100	Entered Mode 2.
March 7, 0131	Reactor critical.
March 7, 2120	Entered Mode 1.
March 7, 2251	Synchronized generator and applied block load of 55 MWe gross.
March 10, 1915	Attained 94.5% reactor power.
March 10, 2240	Turbine tripped on low main condenser vacuum with circulating water pump P-116 secured to correct a high chloride condition in the steam generators and a salt water leak in the SE condenser quadrant. Cause of low vacuum was plugged drains on the condenser air removal lines.
March 12, 0315	Entered Mode 2.
March 12, 0326	Reactor critical.
March 12, 2030	Entered Mode 1.
March 13, 0116	Synchronized generator and applied block load of 55 MWe gross.

<u>Date/Time</u>	<u>Event</u>
March 13, 0355	Commenced reactor power increase from 20% at 5% per hour.
March 13, 0950	Reached 40% reactor power.
March 14, 0700	Reached 85% reactor power.
March 15, 0300	Reactor power at 50% following inspection of SE quadrant of main condenser for salt leaks. Commenced power increase at 80%.
March 15, 1736	Commenced power increase from 80% to 95% at 3-5% per hour for observation of turbine vibration.
March 15, 2152	Achieved 95% reactor power and 1065 MWe gross turbine load.
March 16, 0035	Reduced reactor power to 92% and turbine load to 1020 MWe gross to perform turbine stop and governor valve testing.
March 16, 0415	Attained 100% reactor power and 1135 MWe gross turbine load following completion of turbine valve testing.
March 18, 1645	Commenced 200 hour warranty run. Reactor power at 100% and turbine load at 1154 MWe gross.
March 27, 0045	Completed 200 hour warranty run.
March 29, 1815	Commenced reactor shutdown for entry into scheduled outage.
March 30, 0300	Entered Mode 2.
March 30, 0310	Entered Mode 3 and began outage activities.
March 31, 1440	Entered Mode 2 following outage completion.
March 31, 1600	Reactor critical.
March 31, 2359	Unit is in Mode 2 and holding at 1% reactor power to allow the purification system to reduce high RCS iodine levels. Return to power operations is planned.

## REFUELING INFORMATION

DOCKET NO. 50-362

UNIT SONGS - 3

DATE April 13, 1984

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1. Scheduled date for next refueling shutdown.  
Not yet determined.
2. Scheduled date for restart following refueling.  
Not yet determined.
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. 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

*Southern California Edison Company*



SAN ONOFRE NUCLEAR GENERATING STATION

P.O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

J. G. HAYNES  
STATION MANAGER

TELEPHONE  
(714) 492-7700

April 13, 1984

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 1984  
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.

Please contact us if we can be of further assistance.

Sincerely,

Enclosures

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

A. E. Chaffee (USNRC Resident Inspector, Units 1, 2 and 3)

J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)

1824  
1/