

NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-361
UNIT SONGS - 2
DATE September 13, 1984
COMPLETED BY L. I. Mayweather
TELEPHONE (714) 492-7700
Ext. 56264

OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 2
2. Reporting Period: August 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	5,855	9,360
12. Number Of Hours Reactor Was Critical	700.05	4,079.55	6,692.25
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	692.08	3,977.9	6,539.60
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,234,711	12,926,028	21,419,563
17. Gross Electrical Energy Generated (MWH)	733,464.5	4,338,716	7,250,681
18. Net Electrical Energy Generated (MWH)	695,670	4,097,487	6,873,132
19. Unit Service Factor	93.02	67.94	69.87
20. Unit Availability Factor	93.02	67.94	69.87
21. Unit Capacity Factor (Using MDC Net)	87.39	65.40	68.63
22. Unit Capacity Factor (Using DER Net)	87.39	65.40	68.63
23. Unit Forced Outage Rate	6.98	4.99	4.52
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>Refueling, October 19, 1984, 3 1/2 month duration</u>			

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 September 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700
Ext. 56264

MONTH August 1984

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	1127.50
2	1080.04
3	1063.54
4	1073.33
5	1071.88
6	1074.17
7	1073.92
8	709.67
9	120.13
10	914.71
11	1055.04
12	1076.25
13	1075.92
14	1079.42
15	677.04
16	672.04

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	1067.00
18	1069.50
19	1065.29
20	1063.00
21	1069.38
22	1076.96
23	1070.21
24	1047.46
25	1059.29
26	711.96
27	0.0
28	596.25
29	1067.04
30	1074.25
31	1014.58

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UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH AUGUST 1984

DOCKET NO. 50-361

UNIT NAME SONGS - 2

DATE September 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700

Ext. 56264

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	LER No.	System Code ⁴	Component Code ⁴	Cause & Corrective Action to Prevent Recurrence
6	840808	F	24.33	A	3	84-043	JC	JX	Reactor and turbine trip due to spurious low DNRB signals due to power supply failure. Faulty power supply replaced.
7	840815	S	0.0	H	5	NA	NA	NA	Reactor power reduced to 46% for cleaning of intake structure.
8	840826	F	27.59	A	3	84-050	ED	BKR	Turbine trip and subsequent reactor trip due to low DNBR/high LPD caused by faulty feeder breaker. The feeder breaker was replaced.

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 September 13, 1984

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TELEPHONE (714) 492-7700
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<u>Date/Time</u>	<u>Event</u>
August 1, 0001	Unit is in Mode 1 at 100% reactor power. Turbine load is 1140 MWe gross. Full power operations are planned.
August 3, 2000	Reduced reactor power to 90% for performance of turbine stop and governor valve testing.
August 4, 0025	Increased reactor power to 100% following completion of turbine valve testing.
August 8, 1710	Reactor and turbine trip from 100% power due to spurious DNBR on all three operable channels.
August 9, 1305	Entered Mode 2.
August 9, 1318	Reactor critical.
August 9, 1555	Entered Mode 1.
August 9, 1730	Synchronized generator and applied block load of 55 MWe gross.
August 10, 1817	Reduced reactor power to 90% for performance of turbine stop and governor valve testing.
August 11, 0345	Increased reactor power to 100% following completion of turbine valve testing.
August 15, 1022	Commenced power reduction due to seaweed intrusion.
August 15, 1112	Increased rate of power reduction due to seaweed.
August 15, 1218	Entered 3.0.3 due to loss of both CCW trains and Train B chiller.
August 15, 1255	Reduced reactor power to 55%.
August 16, 0001	Reduced reactor power to 46%.
August 16, 0600	Began power increase to 60% following cleaning of waterboxes and restoration of CCW Heat Exchanger E002 flow.
August 16, 0628	Reactor power at 50% and turbine load at 480 MWe gross.
August 16, 1430	Commenced power increase to 100%.

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH (Continued)

<u>Date/Time</u>	<u>Event</u>
August 16, 1630	Reactor power at 80% and turbine load at 885 MWe gross.
August 17, 0001	Reactor power at 94% and turbine load at 1067 MWe gross.
August 17, 0407	Reactor power at 100% and turbine load at 1127 MWe gross.
August 22, 0405	Commenced emergency plan drill.
August 22, 0642	Terminated emergency plan drill.
August 24, 2030	Reduced reactor power to 90% for performance of turbine stop and governor valve testing.
August 25, 0225	Increased reactor power to 100% following completion of turbine valve testing.
August 26, 1720	Commenced power reduction due to trip of Main Feedwater Pump Turbine 2K-005.
August 26, 1725	Turbine trip on loss of vacuum. Reactor power less than 55%.
August 26, 1816	Reactor trip due to low DNBR and high LPD trips on Channels A and C of Reactor Protection System.
August 27, 1508	Entered Mode 2.
August 27, 1515	Reentered Mode 3 due to inaccurate ECP.
August 27, 1740	Entered Mode 2.
August 27, 1805	Reactor critical.
August 27, 1903	Entered Mode 1.
August 27, 2100	Synchronized generator and applied block load of 55 MWe gross.
August 28, 0001	Increased reactor power to 40% and turbine load to 370 MWe gross.
August 28, 1640	Commenced power increase to 100%.
August 28, 2030	Reactor power at 80%.
August 28, 2118	Terminated power increase at 94% due to indication of circulating water $\Delta T > 20^{\circ}\text{F}$.

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH (Continued)

<u>Date/Time</u>	<u>Event</u>
August 29, 0001	Reactor power at 100% and turbine load at 1106 MWe gross.
August 31, 1855	Reduced reactor power to 90% for performance of turbine stop and governor valve testing.
August 31, 2040	Increased reactor power to 100% following completion of turbine valve testing.
August 31, 2359	Unit is in Mode 1 at 100% reactor power. Turbine load is 1114 MWe gross. Full power operations are planned.

REFUELING INFORMATION

DOCKET NO. 50-361

UNIT SONGS - 2

DATE September 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700
Ext. 56264

1. Scheduled date for next refueling shutdown.

October 19, 1984

2. Scheduled date for restart following refueling.

January 23, 1985

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, 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 September 13, 1984
COMPLETED BY L. I. Mayweather
TELEPHONE (714) 492-7700
Ext. 56264

OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 3
2. Reporting Period: August 1984
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	744	3,671	3,671
12. Number Of Hours Reactor Was Critical	546.13	2,370.82	2,370.82
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	520.47	2,112.97	2,112.97
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,643,144	6,524,524*	6,524,524*
17. Gross Electrical Energy Generated (MWH)	547,824.5	2,183,138	2,183,138
18. Net Electrical Energy Generated (MWH)	515,656	2,038,455	2,038,455
19. Unit Service Factor	69.96	57.56	57.56
20. Unit Availability Factor	69.96	57.56	57.56
21. Unit Capacity Factor (Using MDC Net)	64.17	51.42	51.42
22. Unit Capacity Factor (Using DER Net)	64.17	51.42	51.42
23. Unit Forced Outage Rate	0	0	0
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

* These numbers have been revised based on audit of the July 1984 values.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-362

UNIT SONGS - 3

DATE September 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700
Ext. 56264

MONTH August 1984

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	380.92
10	1062.33
11	1084.33
12	1097.54
13	1101.21
14	1099.46
15	1093.67
16	1095.04

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	1077.00
18	1076.08
19	1089.42
20	1088.54
21	1135.04
22	1097.42
23	395.83
24	0
25	406.96
26	966.17
27	1092.50
28	1096.54
29	1085.67
30	1060.08
31	1034.96

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH AUGUST 1984

DOCKET NO. 50-362

UNIT NAME SONGS - 3

DATE September 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700

Ext. 56264

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down ³ Reactor	LER No.	System Code ⁴	Component Code ⁴	Cause & Corrective Action to Prevent Recurrence
6	840719	S	193.36	B	4	NA	AB	SG	Continuation of scheduled outage for repair of primary to secondary leak in steam generator E-089.
7	840823	F	30.17	H	2	NA	WI	V	Manually tripped turbine and reactor due to high conductivity in the Condensate and Feedwater Systems. The introduction of chlorides occurred during preparations for resin regeneration in the C:owdown Processing System and was the result of seawater inleakage to the condenser through two check and one control valves.

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

DOCKET NO. 50-362

UNIT SONGS - 3

DATE September 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700
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<u>Date/Time</u>	<u>Event</u>
August 1, 0001	Unit is in Mode 5 at 139°F. Steam Generator E-089 repair in progress. Reactor coolant system fill and vent lineups are in progress. All reactor coolant pump seals have been rebuilt and installed.
August 5, 0444	Entered Mode 4.
August 7, 0335	Entered Mode 3.
August 8, 0541	Entered Mode 2.
August 8, 0643	Reactor critical.
August 8, 1306	Entered Mode 1.
August 8, 1544	Unit tripped on high steam generator level transient as power was being increased.
August 8, 1924	Entered Mode 2.
August 8, 1945	Reactor critical.
August 8, 2215	Entered Mode 1.
August 9, 0122	Synchronized generator and applied block load of 55 MWe gross.
August 10, 0530	Reactor power at 100%.
August 11, 0805	Reduced reactor power to 90% for performance of turbine stop and governor valve testing.
August 11, 1200	Increased reactor power to 100% following completion of turbine valve testing.
August 15, 1224	Commenced power reduction due to entering 3.0.3 caused by loss of Train B Emergency Chiller.
August 15, 1230	Train B chiller operable. Terminated reactor power reduction at 97%.
August 15, 1600	Reactor power increased to 100%.

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH (Continued)

<u>Date/Time</u>	<u>Event</u>
August 15, 1702	Core Operating Limiting Supervising System (COLSS) incore input failed. Commenced power reduction at 1719.
August 15, 1723	COLSS returned to service. Terminated reactor power reduction.
August 16, 0001	Reactor power at 100% and turbine load at 1142 MWe gross.
August 17, 2000	Reduced reactor power to 90% for performance of turbine stop and governor valve testing.
August 19, 0001	Increased reactor power to 100% following completion of turbine valve testing.
August 21, 1845	Both trains of HPSI discovered to have been inoperable for approximately 18 minutes. This condition occurred at approximately 0518 on August 21, 1984, during subgroup relay testing.
August 23, 1014	High conductivity (chlorides) detected in the condensate and feedwater systems. A controlled unit shutdown commenced.
August 23, 1041	Entered Mode 3.
August 23, 1920	Commenced cooldown to Mode 4 upon discovery of inoperability of Steam Generator Wide Range Level Indicator LI-1125-2. This indicator had been inoperable since 0100 on August 16, 1984. This time exceeded the 7 days allowed by LCO 3.3.3.6.
August 23, 1950	Mode 4 cooldown terminated following replacement of faulty lummigraph assembly on LI-1125-2.
August 24, 0535	Entered Mode 2. Steam generator chlorides reduced and clean up continues.
August 24, 0548	Reactor critical.
August 24, 1345	Entered Mode 1.
August 24, 1645	Synchronized generator and applied block load of 67 MWe gross.
August 25, 1128	Commenced power increase to 85%.
August 26, 0815	Commenced power increase to 100%.
August 26, 1630	Reactor power at 100% and turbine load at 1130 MWe gross.
August 29, 2320	COLSS failed. Commenced power reduction at 2340.

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH (Continued)

<u>Date/Time</u>	<u>Event</u>
August 30, 0115	Reactor power at 85%.
August 30, 0617	Unit returned to full power operation following performance of required repairs and surveillances to COLSS.
August 31, 2359	Unit is in Mode 1 at 100% reactor power. Turbine load is 1131 MWe gross. Full power operations are planned.

REFUELING INFORMATION

DOCKET NO. 50-362

UNIT SONGS - 3

DATE September 13, 1984

COMPLETED BY L. I. Mayweather

TELEPHONE (714) 492-7700
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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

SCE

SAN ONOFRE NUCLEAR GENERATING STATION

P.O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

J. G. HAYNES
STATION MANAGER

September 13, 1984

TELEPHONE
(714) 492-7700

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 August 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,

J. G. Haynes

Enclosures

cc: A. E. Chaffee (USNRC Senior Resident Inspector, Units 1, 2 and 3)
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)

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

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