

NRC MONTHLY OPERATING REPORT

DOCKET NO: 50-361
 UNIT NAME: SONGS - 2
 DATE:
 COMPLETED BY: J. L. Darling
 TELEPHONE: (714) 368-6223

OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 2
2. Reporting Period: July 1993
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	744.00	5,087.00	87,264.00
12. Number Of Hours Reactor Was Critical	0.00	3,719.73	64,454.09
13. Reactor Reserve Shutdown Hours	0.00	0.00	0.00
14. Hours Generator On-Line	0.00	3,719.62	63,376.89
15. Unit Reserve Shutdown Hours	0.00	0.00	0.00
16. Gross Thermal Energy Generated (MWH)	0.00	12,281,788.01	207,101,636.33
17. Gross Electrical Energy Generated (MWH)	0.00	4,149,548.00	70,195,108.00
18. Net Electrical Energy Generated (MWH)	(7,828.92)	3,938,722.05	66,546,237.88
19. Unit Service Factor	0.00%	73.12%	72.63%
20. Unit Availability Factor	0.00%	73.12%	72.63%
21. Unit Capacity Factor (Using MDC Net)	0.00%	72.36%	71.27%
22. Unit Capacity Factor (Using DER Net)	0.00%	72.36%	71.27%
23. Unit Forced Outage Rate	0.00%	0.00%	6.50%
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			
25. If Shutdown 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
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 DATE: _____
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 TELEPHONE: (714) 368-6223

MONTH: July 1993

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	<u>0.00</u>
2	<u>0.00</u>
3	<u>0.00</u>
4	<u>0.00</u>
5	<u>0.00</u>
6	<u>0.00</u>
7	<u>0.00</u>
8	<u>0.00</u>
9	<u>0.00</u>
10	<u>0.00</u>
11	<u>0.00</u>
12	<u>0.00</u>
13	<u>0.00</u>
14	<u>0.00</u>
15	<u>0.00</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

16	<u>0.00</u>
17	<u>0.00</u>
18	<u>0.00</u>
19	<u>0.00</u>
20	<u>0.00</u>
21	<u>0.00</u>
22	<u>0.00</u>
23	<u>0.00</u>
24	<u>0.00</u>
25	<u>0.00</u>
26	<u>0.00</u>
27	<u>0.00</u>
28	<u>0.00</u>
29	<u>0.00</u>
30	<u>0.00</u>
31	<u>0.00</u>

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO: 50-361

UNIT NAME: SONGS - 2

DATE:

COMPLETED BY: J. L. Darling

TELEPHONE: (714) 368-6223

REPORT MONTH: July 1993

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	LER No.	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
83	930602	S	744.00	C	2	NA	NA	NA	NA

Note. Refueling shutdown continued from previous month.

¹F-Forced
S-Scheduled

²Reason:
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)

³Method:
1-Manual
2-Manual Scram.
3-Automatic Scram.
4-Continuation from
Previous Month
5-Reduction in the Average
Daily Power Level of more
than 20% from the previous day
6-Other (Explain)

⁴IEEE Std 805-1984

⁵IEEE Std 803A-1983

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO: 50-361
UNIT NAME: SONGS - 2
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TELEPHONE: (714) 368-6223

<u>Date</u>	<u>Time</u>	<u>Event</u>
July 1	0001	Unit is defueled, Cycle 7 Refueling Outage in progress.
July 14	1140	Commenced core re-load
July 18	1458	Completed core re-load
July 22	2245	Entered Mode 5.
July 27	0520	Completed RCS fill, vent, and pressurizer bubble formation.
July 31	2305	Entered Mode 4.
	2400	Unit is in Mode 4, Heat up in progress.

REFUELING INFORMATION

DOCKET NO: 50-361
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COMPLETED BY: J. L. Darling
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MONTH: July 1993

1. Scheduled date for next refueling shutdown.

Cycle 7 refueling outage began June 5, 1993.

2. Scheduled date for restart following refueling.

Restart from Cycle 7 refueling outage occurred on August 8, 1993.

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

No.

What will these be?

NA

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

NA

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.

REFUELING INFORMATION

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MONTH: July 1993

6. The number of fuel assemblies.

a) In the core. 217

b) In the spent fuel storage pool. 662 (592 Unit 2 Spent
Fuel Assemblies,
70 Unit 1 Spent Fuel
Assemblies.)

7. Licensed spent fuel storage capacity. 1542

Intended change in spent fuel storage capacity. None

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

Approximately 2005 (full off-load capability)

NRC MONTHLY OPERATING REPORT

DOCKET NO: 50-362
 UNIT NAME: SONGS - 3
 DATE:
 COMPLETED BY: J. L. Darling
 TELEPHONE: (714) 368-6223

OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 3
2. Reporting Period: July 1993
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): NA
10. Reasons For Restrictions, If Any: NA

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	744.00	5,087.00	81,815.00
12. Number Of Hours Reactor Was Critical	721.25	5,008.22	54,207.98
13. Reactor Reserve Shutdown Hours	0.00	0.00	0.00
14. Hours Generator On-Line	713.23	4,976.73	62,582.79
15. Unit Reserve Shutdown Hours	0.00	0.00	0.00
16. Gross Thermal Energy Generated (MWH)	2,359,461.23	16,472,641.40	201,106,715.64
17. Gross Electrical Energy Generated (MWH)	791,709.50	5,628,205.50	68,255,065.50
18. Net Electrical Energy Generated (MWH)	750,434.00	5,346,266.00	64,491,936.36
19. Unit Service Factor	95.88%	97.83%	76.49%
20. Unit Availability Factor	95.88%	97.83%	76.49%
21. Unit Capacity Factor (Using MDC Net)	93.53%	97.33%	72.99%
22. Unit Capacity Factor (Using DER Net)	93.53%	97.33%	72.99%
23. Unit Forced Outage Rate	4.14%	2.17%	7.06%
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>Refueling shutdown, October 9, 1993, forecast duration 85 days.</u>			
25. If Shutdown 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: 50-362
UNIT NAME: SONGS - 3
DATE:
COMPLETED BY: J. L. Darling
TELEPHONE: (714) 368-6223

MONTH: July 1993DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	1086.29
2	1083.71
3	1075.50
4	1081.38
5	832.75
6	0.00
7	478.04
8	1060.50
9	1076.21
10	1078.96
11	1079.71
12	1070.25
13	1077.50
14	1077.33
15	1078.21

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

16	1076.38
17	1041.08
18	846.75
19	1085.42
20	1090.63
21	1087.04
22	1087.29
23	1085.13
24	1075.21
25	1074.50
26	1084.08
27	1084.46
28	1087.71
29	1091.54
30	1086.63
31	1092.54

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: July 1993DOCKET NO: 50-362UNIT NAME: SONGS - 3

DATE: _____

COMPLETED BY: J. L. DarlingTELEPHONE: (714) 368-6223

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	LER No.	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
77	930705	F	30.77	A	3	50-362/93-004	TC	[LD,TBG]	See note below
<p>Note. A Low Vacuum Turbine Trip and Reactor Trip occurred when the gland seal steam system spillover valve failed open. The failed open spillover valve caused a loss of gland steam to the low pressure turbine glands, resulting in a vacuum leak. A failure of the instrument air supply tubing caused the valve to fail open. Fatigue induced material failure was identified as the root cause of the instrument air supply tubing failure. Corrective actions taken include: 1) replacement of the failed Instrument Air tubing, and 2) inspecting the tubing for UNIT 2 and 3 Turbine Gland Steam supply and spillover valves.</p>									
78	930718	S	NA	B	5	NA	KE	COND	Unit load reduced to perform circulating water system heat treat.

¹F-Forced
S-Scheduled

²Reason:
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)

³Method:
1-Manual
2-Manual Scram.
3-Automatic Scram.
4-Continuation from
Previous Month
5-Reduction in the Average
Daily Power Level of more
than 20% from the previous day
6-Other (Explain)

⁴IEEE Std 805-1984⁵IEEE Std 803A-1983

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

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<u>Date</u>	<u>Time</u>	<u>Event</u>
July 1	0001	Unit is in Mode 1, 100% reactor power, 1138 MWe.
July 5	1944	Reactor tripped on loss of load when the main turbine tripped on low condenser vacuum. Unit in Mode 3.
July 6	1618	Commenced Reactor start up, following repairs to turbine gland seal steam, spillover valve, air supply tubing.
	1656	Entered Mode 2.
	1759	Reactor critical.
	2252	Entered Mode 1.
July 7	0230	Unit synchronized to grid, Turbine Load 100 MWe. Commenced power increase to 100%.
July 8	0030	Reactor power stabilized at 90% to perform excore instrument calibration.
	0321	Commenced power increase to 100% following calibration of excore instruments.
	0515	Unit at 99% reactor power, 1120 MWe. Turbine control valves full open.
July 17	1900	Commenced Unit load decrease to 80% reactor power to perform circulating water system heat treat.
	2305	Unit at 80% reactor power, 890 MWe.
July 18	2012	Commenced unit load increase to 100% after completion of circulating water system heat treat.
July 19	0015	Unit at 100% Reactor power, 1130 MWe.
July 31	2400	Unit is in Mode 1, 100% Reactor Power, 1140 MWe.

REFUELING INFORMATION

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MONTH: July 1993

1. Scheduled date for next refueling shutdown.

Cycle 7 refueling outage is forecast for October 9, 1993.

2. Scheduled date for restart following refueling.

Restart from Cycle 7 refueling outage is forecast for January 2, 1993.

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

Yes.

What will these be?

- A. A change has been requested to Technical Specification 3.7.1.1 to allow an increased tolerance on the main steam safety valves for the purpose of determining valve operability. Although not required, NRC approval of this change is desired to support the surveillance testing scheduled to be performed during the Unit 3 Cycle 7 outage.
- B. A change will be requested to Technical Specification 3.3.2 to provide for enhancements to the degraded voltage protection. NRC approval is required to permit installation of the required plant modifications during the Unit 3 Cycle 7 Outage.

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

- | | |
|-----------------------------|-------------------------|
| A. Proposed Change on MSSVs | Submitted March 5, 1993 |
| B. Proposed Change to 3.3.2 | August 31, 1993 |

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.

REFUELING INFORMATION

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MONTH: July 1993

6. The number of fuel assemblies.

a) In the core. 217

b) In the spent fuel storage pool. 602 (484 Unit 3 Spent
Fuel Assemblies, 118
Unit 1 Spent Fuel
Assemblies)

7. Licensed spent fuel storage capacity. 1542

Intended change in spent fuel storage capacity. None

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

Approximately 2004 (full off-load capability)