

NRC MONTHLY OPERATING REPORT  
SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 2

DOCKET NO: 50-361  
UNIT NAME: SONGS - 2  
DATE: April 12, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 2
2. Reporting Period: March 1996
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	<u>744.00</u>	<u>2,184.00</u>	<u>110,641.00</u>
12. Number Of Hours Reactor Was Critical	<u>744.00</u>	<u>2,184.00</u>	<u>85,572.19</u>
13. Reactor Reserve Shutdown Hours	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
14. Hours Generator On-Line	<u>744.00</u>	<u>2,184.00</u>	<u>84,014.31</u>
15. Unit Reserve Shutdown Hours	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
16. Gross Thermal Energy Generated (MWH)	<u>2,440,983.00</u>	<u>7,241,582.90</u>	<u>274,879,597.65</u>
17. Gross Electrical Energy Generated (MWH)	<u>839,080.50</u>	<u>2,483,241.50</u>	<u>93,185,124.00</u>
18. Net Electrical Energy Generated (MWH)	<u>798,445.08</u>	<u>2,365,321.40</u>	<u>88,407,913.31</u>
19. Unit Service Factor	<u>100.00%</u>	<u>100.00%</u>	<u>75.93%</u>
20. Unit Availability Factor	<u>100.00%</u>	<u>100.00%</u>	<u>75.93%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>100.30%</u>	<u>101.22%</u>	<u>74.68%</u>
22. Unit Capacity Factor (Using DER Net)	<u>100.30%</u>	<u>101.22%</u>	<u>74.68%</u>
23. Unit Forced Outage Rate	<u>0.00%</u>	<u>0.00%</u>	<u>5.11%</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>None</u>			
25. If Shutdown At End Of Report Period, Estimated Date of Startup: <u>N/A</u>			
26. Units In Test Status (Prior To Commercial Operation): <u>Forecast</u>			

INITIAL CRITICALITY  
INITIAL ELECTRICITY  
COMMERCIAL OPERATION

<u>NA</u>	<u>NA</u>
<u>NA</u>	<u>NA</u>
<u>NA</u>	<u>NA</u>

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO: 50-361  
UNIT NAME: SONGS - 2  
DATE: April 12, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

MONTH: March 1996

DAY AVERAGE DAILY POWER LEVEL  
(Mwe-Net)

1	<u>1102.17</u>
2	<u>1088.33</u>
3	<u>1098.42</u>
4	<u>1100.58</u>
5	<u>1098.67</u>
6	<u>1098.83</u>
7	<u>1098.04</u>
8	<u>1091.63</u>
9	<u>1090.00</u>
10	<u>1089.38</u>
11	<u>1088.04</u>
12	<u>1086.46</u>
13	<u>1076.38</u>
14	<u>1082.33</u>
15	<u>1043.67</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

16	<u>762.00</u>
17	<u>911.67</u>
18	<u>1094.83</u>
19	<u>1100.83</u>
20	<u>1093.75</u>
21	<u>1096.96</u>
22	<u>1095.58</u>
23	<u>1093.83</u>
24	<u>1092.42</u>
25	<u>1091.25</u>
26	<u>1091.46</u>
27	<u>1079.29</u>
28	<u>1082.75</u>
29	<u>1081.58</u>
30	<u>1078.88</u>
31	<u>1088.50</u>

## UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCUMENT NO: 50-361UNIT NAME: SONGS - 2REPORT MONTH: March 1996DATE: April 12, 1996COMPLETED BY: C. E. WilliamsTELEPHONE: (714) 368-6707

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>5</sup>	Cause & Corrective Action to Prevent Recurrence
94	3/16/96	S	NA	B	5	NA	KE SB	COND FCV, ISV	Condensor Waterbox cleaning and governor and stop valve maintenance

<sup>1</sup>F-Forced  
S-Scheduled
<sup>2</sup>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)

<sup>3</sup>Method:

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)

<sup>4</sup>IEEE Std 805-1984<sup>5</sup>IEEE Std 803A-1983

# SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO: 50-361  
UNIT NAME: SONGS - 2  
DATE: April 12, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

<u>Date</u>	<u>Time</u>	<u>Event</u>
March	01 0000	Mode 1, Reactor power at 100%, 1153 MWe.
March	02 2130	Unit load reduced to approximately 1070 MWe for high pressure turbine stop and governor valve testing.
March	03 0020	Completed high pressure turbine governor valve testing. Unit returned to full load, 1150 MWe.
March	15 2000	Commenced power reduction to 75% reactor power for condenser waterbox cleaning, and stop and governor valve maintenance.
	2200	Reactor power at 75%, 830 MWe.
March	17 1000	Commenced reactor power increase following condenser waterbox cleaning, and stop and governor valve maintenance.
	1728	Completed power increase, reactor Power at 98.8%, 1136 MWe.
March	29 2150	Reduced Reactor power to 94%, 1065 MWe, to perform turbine stop and governor valve testing.
March	30 0005	Commenced reactor power increase following turbine stop and governor valve testing.
	0512	Reactor power at 99.1%, 1145 MWe.
March	31 2400	Mode 1, Reactor power at 98.7%, 1132 MWe.

# REFUELING INFORMATION

DOCKET NO: 50-361  
UNIT NAME: SONGS - 2  
DATE: April 12, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

MONTH: March 1996

1. Scheduled date for next refueling shutdown:

Cycle 9 refueling outage is forecast for November 30, 1996.

2. Scheduled date for restart following refueling:

Restart from Cycle 9 refueling outage is forecast for February 3, 1997.

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

Unknown at this time.

What will these be?

Unknown at this time.

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

Unknown at this time.

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.

Unknown at this time.

# REFUELING INFORMATION

DOCKET NO: 50-361  
UNIT NAME: SONGS - 2  
DATE: April 12, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

6. The number of fuel assemblies.

A. In the core. 217

B. In the spent fuel storage pool. 770 Total Fuel Assemblies  
700 Unit 2 Spent Fuel Assemblies  
0 Unit 2 New Fuel Assemblies  
70 Unit 1 Spent Fuel Assemblies

C. In the New Fuel Storage Racks Zero Unit 2 New 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.

March 2005, assuming current fuel loading for all future cycles, and Unit 1 fuel remains at current location.

NRC MONTHLY OPERATING REPORT  
SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 3

DOCKET NO: 50-362  
UNIT NAME: SONGS - 3  
DATE: April 12, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 3
2. Reporting Period: March 1996
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	<u>744.00</u>	<u>2,184.00</u>	<u>105,192.00</u>
12. Number Of Hours Reactor Was Critical	<u>744.00</u>	<u>2,184.00</u>	<u>84,120.70</u>
13. Reactor Reserve Shutdown Hours	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
14. Hours Generator On-Line	<u>744.00</u>	<u>2,184.00</u>	<u>82,403.64</u>
15. Unit Reserve Shutdown Hours	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
16. Gross Thermal Energy Generated (MWH)	<u>2,440,983.00</u>	<u>7,322,949.00</u>	<u>265,822,448.40</u>
17. Gross Electrical Energy Generated (MWH)	<u>848,364.00</u>	<u>2,496,552.00</u>	<u>90,256,022.00</u>
18. Net Electrical Energy Generated (MWH)	<u>806,042.08</u>	<u>2,372,584.40</u>	<u>85,311,947.96</u>
19. Unit Service Factor	<u>100.00%</u>	<u>100.00%</u>	<u>78.34%</u>
20. Unit Availability Factor	<u>100.00%</u>	<u>100.00%</u>	<u>78.34%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>100.31%</u>	<u>100.59%</u>	<u>75.09%</u>
22. Unit Capacity Factor (Using DER Net)	<u>100.31%</u>	<u>100.59%</u>	<u>75.09%</u>
23. Unit Forced Outage Rate	<u>0.00%</u>	<u>0.00%</u>	<u>5.45%</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>None</u>			
25. If Shutdown At End Of Report Period, Estimated Date of Startup: <u>NA</u>			
26. Units In Test Status (Prior To Commercial Operation):	Forecast	Achieved	

INITIAL CRITICALITY	<u>NA</u>	<u>NA</u>
INITIAL ELECTRICITY	<u>NA</u>	<u>NA</u>
COMMERCIAL OPERATION	<u>NA</u>	<u>NA</u>

# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO: 50-362  
UNIT NAME: SONGS - 3  
DATE: April 12, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

MONTH: March 1996

DAY	AVERAGE DAILY POWER LEVEL (Mwe-Net)	DAY	AVERAGE DAILY POWER LEVEL (Mwe-Net)
1	<u>1096.25</u>	16	<u>1080.42</u>
2	<u>1093.13</u>	17	<u>1085.58</u>
3	<u>1090.63</u>	18	<u>1086.17</u>
4	<u>1090.58</u>	19	<u>1087.08</u>
5	<u>1090.88</u>	20	<u>1086.63</u>
6	<u>1090.79</u>	21	<u>1085.63</u>
7	<u>1088.33</u>	22	<u>1083.88</u>
8	<u>1086.29</u>	23	<u>1082.83</u>
9	<u>1086.83</u>	24	<u>1081.29</u>
10	<u>1085.08</u>	25	<u>1079.96</u>
11	<u>1085.54</u>	26	<u>1082.58</u>
12	<u>1085.38</u>	27	<u>1081.33</u>
13	<u>1074.08</u>	28	<u>1080.00</u>
14	<u>1039.63</u>	29	<u>1080.17</u>
15	<u>1081.67</u>	30	<u>1077.67</u>
		31	<u>1078.75</u>



## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: March 1996

DOCKET NO: 50-362  
 UNIT NAME: SONGS - 3  
 DATE: April 12, 1996  
 COMPLETED BY: C. E. Williams  
 TELEPHONE: (714) 368-6707

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>5</sup>	Cause & Corrective Action to Prevent Recurrence
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There were no unit shutdowns or reductions in the Average Daily Power Level of more than 20% this reporting period.

<sup>1</sup>F-Forced  
S-Scheduled

<sup>2</sup>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)

<sup>3</sup>Method:  
 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)

<sup>4</sup>IEEE Std 805-1984

<sup>5</sup>IEEE Std 803A-1983

# SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO: 50-362  
UNIT NAME: SONGS - 3  
DATE: April 12, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

<u>Date</u>		<u>Time</u>	<u>Event</u>
March	01	0000	Mode 1, reactor power 99.3%, 1142 MWe.
March	13	2200	Commenced power reduction to 82%, to bump circulating water system pumps.
		2357	Completed power reduction, reactor power at 82%, 903 MWe.
March	14	0245	Commenced reactor power increase after bumping four circulating water system pumps.
		0710	Completed power increase. Reactor at 99.3%, 1140 MWe.
March	29	2400	Mode 1, Reactor at 99.2%, 1127 MWe.

# REFUELING INFORMATION

DOCKET NO: 50-362  
UNIT NAME: SONGS - 3  
DATE: April 12, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

MONTH: March 1996

1. Scheduled date for next refueling shutdown.

Cycle 9 refueling outage is forecast for April 5, 1997.

2. Scheduled date for restart following refueling.

Restart from Cycle 9 refueling outage is forecast for June 9, 1997.

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

Unknown at this time.

What will these be?

Unknown at this time.

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

Unknown at this time.

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.

Unknown at this time.

# REFUELING INFORMATION

DOCKET NO: 50-362  
UNIT NAME: SONGS - 3  
DATE: April 12, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

6. The number of fuel assemblies.

A. In the core. 217

B. In the spent fuel storage pool. 818 Total Fuel Assemblies  
700 Unit 3 Spent Fuel Assemblies  
0 Unit 3 New Fuel Assemblies  
118 Unit 1 Spent Fuel Assemblies

C. In the New Fuel Storage Racks Zero Unit 3 New 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.

November 2003 (full off-load capability assuming current fuel loading for all future cycles, and unit 1 fuel remains where it is currently located).