

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

DOCKET NO: 50-361
UNIT NAME: SONGS - 2
DATE: May 14, 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: April 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>719.00</u>	<u>2,903.00</u>	<u>111,360.00</u>
12. Number Of Hours Reactor Was Critical	<u>719.00</u>	<u>2,903.00</u>	<u>86,291.19</u>
13. Reactor Reserve Shutdown Hours	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
14. Hours Generator On-Line	<u>719.00</u>	<u>2,903.00</u>	<u>84,733.31</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>2,359,616.90</u>	<u>9,601,199.80</u>	<u>277,239,214.55</u>
17. Gross Electrical Energy Generated (MWH)	<u>798,959.00</u>	<u>3,282,200.50</u>	<u>93,984,083.00</u>
18. Net Electrical Energy Generated (MWH)	<u>760,554.64</u>	<u>3,125,876.04</u>	<u>89,168,467.95</u>
19. Unit Service Factor	<u>100.00%</u>	<u>100.00%</u>	<u>76.09%</u>
20. Unit Availability Factor	<u>100.00%</u>	<u>100.00%</u>	<u>76.09%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>98.86%</u>	<u>100.63%</u>	<u>74.83%</u>
22. Unit Capacity Factor (Using DER Net)	<u>98.86%</u>	<u>100.63%</u>	<u>74.83%</u>
23. Unit Forced Outage Rate	<u>0.00%</u>	<u>0.00%</u>	<u>5.07%</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):	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: 50-361
UNIT NAME: SONGS - 2
DATE: May 14, 1996
COMPLETED BY: C. E. Williams
TELEPHONE: (714) 368-6707

MONTH: April 1996

DAY AVERAGE DAILY POWER LEVEL
(Mwe-Net)

1	<u>1080.60</u>
2	<u>1077.42</u>
3	<u>1073.52</u>
4	<u>1018.33</u>
5	<u>934.39</u>
6	<u>1071.74</u>
7	<u>1132.91</u>
8	<u>1087.82</u>
9	<u>1089.48</u>
10	<u>1088.54</u>
11	<u>1043.98</u>
12	<u>980.82</u>
13	<u>742.70</u>
14	<u>849.52</u>
15	<u>1084.77</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

16	<u>1097.23</u>
17	<u>1092.31</u>
18	<u>1097.28</u>
19	<u>1095.19</u>
20	<u>1097.54</u>
21	<u>1097.77</u>
22	<u>1097.25</u>
23	<u>1098.23</u>
24	<u>1098.30</u>
25	<u>1094.99</u>
26	<u>1092.66</u>
27	<u>1090.98</u>
28	<u>1090.84</u>
29	<u>1092.24</u>
30	<u>1047.61</u>

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO: 50-361UNIT NAME: SONGS - 2REPORT MONTH: March 1996DATE: May 14, 1996COMPLETED BY: C. E. WilliamsTELEPHONE: (714) 368-6707

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
95	4/13/96	S	NA	B	5	NA	KE	COND	Heat treatment of circulating water system

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

DOCKET NO: 50-361
UNIT NAME: SONGS - 2
DATE: May 14, 1996
COMPLETED BY: C. E. Williams
TELEPHONE: (714) 368-6707

<u>Date</u>	<u>Time</u>	<u>Event</u>
April 01	0000	Mode 1, Reactor power at 98.7%, 1132 MWe.
April 04	0335	Commenced load reduction to 1100 MWe to lower circulating water temperature difference.
	0410	Completed load reduction, reactor power at 95%, 1100 MWe.
	1100	Circulating water temperature difference data logger determined to be inoperable. Commenced power increase for optimal generation.
	1444	Reactor power at 98.7%, 1137 MWe.
	1915	Commenced power reduction to bump circulating water pumps.
	2145	Reactor power at 75%, 810 MWe.
April 05	0840	Commenced power increase after bumping circ water pump.
	1335	Reactor power at 100%, 1130 MWe.
April 06	1028	High pressure turbine governor valve 2200B failed closed. Turbine load reduced to 1053 MWe.
	1345	HP turbine governor valve 2200B returned to service. Commenced raising turbine load.
	1540	Reactor power at 100%, 1135 MWe.
April 07	0200	All clocks adjusted one hour forward for Pacific daylight saving time.
April 11	0630	Stopped third point heater drain pump, 2P058, due to increasing bearing temperature. Reactor power at 99.8%, 1118 MWe.
	1132	Reduced power to 95%, 1070 MWe, for third point heater drain pump 2P058 outage.

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH (Continued)

DOCKET NO: 50-361
UNIT NAME: SONGS - 2
DATE: May 14, 1996
COMPLETED BY: C. E. Williams
TELEPHONE: (714) 368-6707

<u>Date</u>	<u>Time</u>	<u>Event</u>
April 12	2005	Commenced power reduction to 75% to clean condenser water boxes and perform heat treat of circulating water system intake.
	2359	Reactor power at 76%, 780 MWe.
April 14	2015	Commenced reactor power increase to full power following circulating water system heat treat, and high pressure turbine stop and governor valve testing.
April 15	0220	Reactor power at 98.2%, 1134 MWe.
April 30	2400	Mode 1, Reactor power at 99.7%, 1141 MWe.

REFUELING INFORMATION

DOCKET NO: 50-361
UNIT NAME: SONGS - 2
DATE: May 14, 1996
COMPLETED BY: C. E. Williams
TELEPHONE: (714) 368-6707

MONTH: April 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?

Yes.

What will these be?

1. Increase in Diesel Generator allowed outage time (AOT)
2. Increase in Low Pressure Safety Injection AOT
3. Increase in fuel enrichment to 4.8%.
4. Revision to test interval of load sequencing relays.
5. Implementation of barrier control program.
6. Revision to Containment Isolation Valve action statement.
7. Appendix J Option B Technical Specification.
8. Increase in Safety Injection Tank boron concentration.

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

1. PCN 453 Diesel Generator AOT	Submitted 11/2/95
2. PCN 452 Low Pressure Safety Injection AOT	Submitted 11/8/95
3. PCN 449 Enrichment Increase	Submitted 12/6/95
4. PCN 454 Load Sequencing Relays	Forecast 5/24/96
5. PCN 467 Barrier Control Program	Submitted 5/09/96
6. PCN 460 Containment Isolation Valves Supplement	Submitted 4/11/96
7. PCN 361 Appendix J Option B	Forecast 5/30/96
8. PCN 465 Safety Injection Tank Boron	Forecast 6/15/96
	Forecast 5/24/96

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.

Increase in fuel enrichment.

REFUELING INFORMATION

DOCKET NO: 50-361
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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.

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

REFUELING INFORMATION

DOCKET NO: 50-361
UNIT NAME: SONGS - 2
DATE: May 14, 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.

April 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: May 14, 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: April 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>719.00</u>	<u>2,903.00</u>	<u>105,911.00</u>
12. Number Of Hours Reactor Was Critical	<u>719.00</u>	<u>2,903.00</u>	<u>84,839.70</u>
13. Reactor Reserve Shutdown Hours	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
14. Hours Generator On-Line	<u>719.00</u>	<u>2,903.00</u>	<u>83,122.64</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>2,359,616.90</u>	<u>9,682,565.90</u>	<u>268,182,065.30</u>
17. Gross Electrical Energy Generated (MWH)	<u>795,852.50</u>	<u>3,292,404.50</u>	<u>91,051,874.50</u>
18. Net Electrical Energy Generated (MWH)	<u>754,495.64</u>	<u>3,127,080.04</u>	<u>86,066,443.60</u>
19. Unit Service Factor	<u>100.00%</u>	<u>100.00%</u>	<u>78.48%</u>
20. Unit Availability Factor	<u>100.00%</u>	<u>100.00%</u>	<u>78.48%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>97.16%</u>	<u>99.74%</u>	<u>75.24%</u>
22. Unit Capacity Factor (Using DER Net)	<u>97.16%</u>	<u>99.74%</u>	<u>75.24%</u>
23. Unit Forced Outage Rate	<u>0.00%</u>	<u>0.00%</u>	<u>5.41%</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: May 14, 1996
COMPLETED BY: C. E. Williams
TELEPHONE: (714) 368-6707

MONTH: April 1996

DAY	AVERAGE DAILY POWER LEVEL (Mwe-Net)	DAY	AVERAGE DAILY POWER LEVEL (Mwe-Net)
1	<u>1077.27</u>	16	<u>1081.15</u>
2	<u>1075.55</u>	17	<u>1082.43</u>
3	<u>1072.86</u>	18	<u>1079.28</u>
4	<u>1072.92</u>	19	<u>1082.82</u>
5	<u>1023.23</u>	20	<u>1083.08</u>
6	<u>725.28</u>	21	<u>1080.90</u>
7	<u>808.35</u>	22	<u>1081.42</u>
8	<u>908.82</u>	23	<u>1083.06</u>
9	<u>1081.73</u>	24	<u>1078.55</u>
10	<u>1085.21</u>	25	<u>1080.15</u>
11	<u>1084.48</u>	26	<u>1073.62</u>
12	<u>1083.99</u>	27	<u>1071.40</u>
13	<u>1082.11</u>	28	<u>1069.76</u>
14	<u>1081.35</u>	29	<u>1071.62</u>
15	<u>1080.81</u>	30	<u>1027.82</u>

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: April 1996DOCKET NO: 50-362UNIT NAME: SONGS - 3DATE: May 14, 1996COMPLETED BY: C. E. WilliamsTELEPHONE: (714) 368-6707

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
90	4/6/96	S	NA	B	5	NA	KE	COND	Heat treatment of circulating water system

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: 50-362
UNIT NAME: SONGS - 3
DATE: May 14, 1996
COMPLETED BY: C. E. Williams
TELEPHONE: (714) 368-6707

<u>Date</u>	<u>Time</u>	<u>Event</u>
April	01 0000	Mode 1, reactor power at 99.2%, 1127 MWe.
April	05 1906	Commenced power reduction to 75% for circulating water system condenser water box cleaning and intake heat treat.
	2145	Reactor at 75%, 792 MWe.
April	07 0200	All clocks adjusted one hour forward for Pacific daylight saving time
	1730	Commenced power increase to 80% in preparation for heat treatment of circulating water system intake.
	1930	Unit at 80% reactor power, 906 MWe.
April	08 0104	Lowered reactor power to 78% and commenced 7 hour heat treat at 96 °F due to condenser vacuum limits.
	1115	Commenced power increase to full load following completion of heat treatment.
	1645	Reactor at 99.2%, 1117 MWe.
April	29 2400	Mode 1, Reactor at 99.2%, 1117 MWe.

REFUELING INFORMATION

DOCKET NO: 50-362
UNIT NAME: SONGS - 3
DATE: May 14, 1996
COMPLETED BY: C. E. Williams
TELEPHONE: (714) 368-6707

MONTH: April 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: May 14, 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).