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 FACIL:50-361 San Onofre Nuclear Station, Unit 2, Southern Californ 05000361  
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 SIACOR,E.R. Southern California Edison Co.  
 MORGAN,H.E. Southern California Edison Co.  
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: Monthly operating rept for Nov 1988 for San Onofre Nuclear  
 Generating Station Unit 2.W/881215 ltr.

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# NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-361  
 UNIT SONGS - 2  
 DATE December 15, 1988  
 COMPLETED BY E. R. Siacor  
 TELEPHONE (714) 368-6223

## OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 2
2. Reporting Period: November 1988
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>720.00</u>	<u>8,040.00</u>	<u>46,369.00</u>
12. Number Of Hours Reactor Was Critical	<u>720.00</u>	<u>7,542.31</u>	<u>33,095.99</u>
13. Reactor Reserve Shutdown Hours	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
14. Hours Generator On-Line	<u>720.00</u>	<u>7,495.17</u>	<u>32,441.02</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>2,421,699.23</u>	<u>24,978,172.21</u>	<u>105,139,297.49</u>
17. Gross Electrical Energy Generated (MWH)	<u>836,456.50</u>	<u>8,579,332.50</u>	<u>35,565,794.00</u>
18. Net Electrical Energy Generated (MWH)	<u>798,580.00</u>	<u>8,173,878.00</u>	<u>33,692,624.35</u>
19. Unit Service Factor	<u>100.00%</u>	<u>93.22%</u>	<u>69.96%</u>
20. Unit Availability Factor	<u>100.00%</u>	<u>93.22%</u>	<u>69.96%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>103.66%</u>	<u>95.01%</u>	<u>67.91%</u>
22. Unit Capacity Factor (Using DER Net)	<u>103.66%</u>	<u>95.01%</u>	<u>67.91%</u>
23. Unit Forced Outage Rate	<u>0.00%</u>	<u>0.76%</u>	<u>3.76%</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):	<u>NA</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 December 15, 1988  
 COMPLETED BY E. R. Siacor  
 TELEPHONE (714) 368-6223

MONTH November 1988

DAY      AVERAGE DAILY POWER LEVEL  
            (MWe-Net)

1	<u>1118.79</u>
2	<u>1116.33</u>
3	<u>1117.29</u>
4	<u>1114.58</u>
5	<u>1116.71</u>
6	<u>1116.46</u>
7	<u>1114.17</u>
8	<u>1113.46</u>
9	<u>1113.29</u>
10	<u>1113.29</u>
11	<u>1105.17</u>
12	<u>1112.17</u>
13	<u>945.67</u>
14	<u>1113.92</u>
15	<u>1116.42</u>
16	<u>1116.21</u>

DAY      AVERAGE DAILY POWER LEVEL  
            (MWe-Net)

17	<u>1115.63</u>
18	<u>1111.42</u>
19	<u>1117.88</u>
20	<u>1117.21</u>
21	<u>1118.08</u>
22	<u>1120.08</u>
23	<u>1119.00</u>
24	<u>1116.54</u>
25	<u>1114.00</u>
26	<u>1115.63</u>
27	<u>1101.67</u>
28	<u>1108.08</u>
29	<u>1116.67</u>
30	<u>1118.38</u>
31	<u>NA</u>

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## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH NOVEMBER 1988

DOCKET NO. 50-361  
UNIT NAME SONGS - 2  
DATE December 15, 1988  
COMPLETED BY E. R. Siacor  
TELEPHONE (714) 368-6223

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
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

<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 of 20%  
or greater in the  
past 24 hours  
6-Other (Explain)

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

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

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# SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO.	50-361
UNIT	SONGS - 2
DATE	December 15, 1988
COMPLETED BY	E. R. Siacor
TELEPHONE	(714) 368-6223

<u>Date</u>	<u>Time</u>	<u>Event</u>
November 1	0001	Unit is in Mode 1 at 100% reactor power. Turbine load at 1168 MWe gross.
November 13	0005	Commenced reduction to 80% reactor power to perform heat treating operations for the circulating water tunnels.
	0415	Reactor at 80% power.
	0855	Reversed tunnel flows for heat treating operations.
	1040	Commenced heat treating operations.
	1525	Commenced reactor power increase following completion of heat treating operations.
	1905	Reactor at 100% power.
November 30	2400	Unit is in Mode 1 at 100% reactor power. Turbine load at 1160 MWe gross.

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## REFUELING INFORMATION

DOCKET NO. 50-361  
UNIT \_\_\_\_\_ SONGS - 2  
DATE December 15, 1988  
COMPLETED BY E. R. Siacor  
TELEPHONE (714) 368-6223

MONTH: November 1988

1. Scheduled date for next refueling shutdown.

August 1989

2. Scheduled date for restart following refueling.

October 1989

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. 268

7. Licensed spent fuel storage capacity. 800

Intended change in spent fuel storage capacity. 1572, forecasted to occur during Cycle 5 (1990)

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

Approximately 1995 (refueling only)

Approximately 1993 (full off load capability)

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# NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-362  
 UNIT SONGS - 3  
 DATE December 15, 1988  
 COMPLETED BY E. R. Siacor  
 TELEPHONE (714) 368-6223

## OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 3
2. Reporting Period: November 1988
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	720.00	8,040.00	40,920.00
12. Number Of Hours Reactor Was Critical	720.00	5,186.77	28,934.74
13. Reactor Reserve Shutdown Hours	0.00	0.00	0.00
14. Hours Generator On-Line	720.00	4,971.99	27,846.19
15. Unit Reserve Shutdown Hours	0.00	0.00	0.00
16. Gross Thermal Energy Generated (MWH)	2,433,112.43	16,458,106.52	86,059,502.34
17. Gross Electrical Energy Generated (MWH)	841,226.50	5,639,167.00	29,117,068.00
18. Net Electrical Energy Generated (MWH)	801,884.00	5,320,832.73	27,390,497.20
19. Unit Service Factor	100.00%	61.84%	68.05%
20. Unit Availability Factor	100.00%	61.84%	68.05%
21. Unit Capacity Factor (Using MDC Net)	103.12%	61.28%	61.98%
22. Unit Capacity Factor (Using DER Net)	103.12%	61.28%	61.98%
23. Unit Forced Outage Rate	0.00%	2.45%	8.34%
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	NA	NA
INITIAL ELECTRICITY	NA	NA
COMMERCIAL OPERATION	NA	NA

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# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-362  
 UNIT SONGS - 3  
 DATE December 15, 1988  
 COMPLETED BY E. R. Siacor  
 TELEPHONE (714) 368-6223

MONTH November 1988

DAY      AVERAGE DAILY POWER LEVEL  
          (MWe-Net)

1	<u>1115.83</u>
2	<u>1120.29</u>
3	<u>1119.33</u>
4	<u>1113.38</u>
5	<u>1119.42</u>
6	<u>1117.96</u>
7	<u>1118.50</u>
8	<u>1119.04</u>
9	<u>1118.42</u>
10	<u>1116.67</u>
11	<u>1112.42</u>
12	<u>1113.21</u>
13	<u>1113.54</u>
14	<u>1101.25</u>
15	<u>1102.08</u>
16	<u>1119.21</u>

DAY      AVERAGE DAILY POWER LEVEL  
          (MWe-Net)

17	<u>1119.63</u>
18	<u>1112.46</u>
19	<u>1118.54</u>
20	<u>1117.46</u>
21	<u>1114.71</u>
22	<u>1117.04</u>
23	<u>1101.04</u>
24	<u>1116.29</u>
25	<u>1116.04</u>
26	<u>1109.00</u>
27	<u>1078.21</u>
28	<u>1116.33</u>
29	<u>1117.88</u>
30	<u>1116.67</u>
31	<u>NA</u>

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## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH NOVEMBER 1988

DOCKET NO. 50-362  
UNIT NAME SONGS - 3  
DATE December 15, 1988  
COMPLETED BY E. R. Siacor  
TELEPHONE (714) 368-6223

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
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

<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 of 20%  
or greater in the  
past 24 hours  
6-Other (Explain)

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

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

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# SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO.	50-362
UNIT	SONGS - 3
DATE	December 15, 1988
COMPLETED BY	E. R. Siacor
TELEPHONE	(714) 368-6223

<u>Date</u>	<u>Time</u>	<u>Event</u>
November 1	0001	Unit is in Mode 1 at 100% reactor power. Turbine load at 1164 MWe gross.
November 27	0920	Commenced reduction to 85% reactor power to allow bumping of circulating water pump.
	1222	Reactor at 85% power.
	1245	Commenced power increase following bumping of circulating water pump.
	1730	Reactor at 100% power.
November 30	2400	Unit is in Mode 1 at 100% reactor power. Turbine load at 1160 MWe gross.

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# REFUELING INFORMATION

DOCKET NO. 50-362  
 UNIT SONGS - 3  
 DATE December 15, 1988  
 COMPLETED BY E. R. Siacor  
 TELEPHONE (714) 368-6223

MONTH: November 1988

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. 268
7. Licensed spent fuel storage capacity. 800  
 Intended change in spent fuel storage capacity. 1572, forecasted to occur during Cycle 5 (1991)
8. Projected date of last refueling that can be discharged to spent fuel storage pool assuming present capacity.  
 Approximately 1996 (refueling only)  
 Approximately 1994 (full off load capability)

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***Southern California Edison Company***

SAN ONOFRE NUCLEAR GENERATING STATION

P. O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

H. E. MORGAN  
STATION MANAGER

TELEPHONE  
(714) 368-6241

December 15, 1988

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Subject: Docket Nos. 50-361/50-362  
Monthly Operating Reports for November 1988  
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)  
F. R. Huey (USNRC Senior Resident Inspector, Units 1, 2 and 3)  
Institute of Nuclear Power Operations (INPO)

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