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 FACIL:50-361 San Onofre Nuclear Station, Unit 2, Southern Californ 05000361
 50-362 San Onofre Nuclear Station, Unit 3, Southern Californ 05000362
 AUTH.NAME AUTHOR AFFILIATION
 SIACOR,E.R. Southern California Edison Co.
 MORGAN,H.E. Southern California Edison Co.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: Monthly operating repts for Apr 1988.W/880513 ltr.

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NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-361
 UNIT SONGS - 2
 DATE 05/13/88
 COMPLETED BY E. R. Siacor
 TELEPHONE (714) 368-6223

OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 2
2. Reporting Period: April 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>719.00</u>	<u>2,903.00</u>	<u>41,232.00</u>
12. Number Of Hours Reactor Was Critical	<u>627.73</u>	<u>2,453.61</u>	<u>28,007.29</u>
13. Reactor Reserve Shutdown Hours	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
14. Hours Generator On-Line	<u>603.85</u>	<u>2,415.90</u>	<u>27,361.75</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>2,057,911.40</u>	<u>7,993,161.57</u>	<u>88,154,286.84</u>
17. Gross Electrical Energy Generated (MWH)	<u>673,081.50</u>	<u>2,749,038.00</u>	<u>29,735,499.50</u>
18. Net Electrical Energy Generated (MWH)	<u>637,840.00</u>	<u>2,611,684.00</u>	<u>28,130,430.34</u>
19. Unit Service Factor	<u>83.98%</u>	<u>83.22%</u>	<u>66.36%</u>
20. Unit Availability Factor	<u>83.98%</u>	<u>83.22%</u>	<u>66.36%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>82.91%</u>	<u>84.08%</u>	<u>63.76%</u>
22. Unit Capacity Factor (Using DER Net)	<u>82.91%</u>	<u>84.08%</u>	<u>63.76%</u>
23. Unit Forced Outage Rate	<u>0.00%</u>	<u>0.00%</u>	<u>4.24%</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

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

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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-361
 UNIT SONGS - 2
 DATE 05/13/88
 COMPLETED BY E. R. Siacor
 TELEPHONE (714) 368-6223

MONTH April 1988

DAY AVERAGE DAILY POWER LEVEL
 (MWe-Net)

1	0.00
2	0.00
3	0.00
4	0.00
5	0.00
6	439.08
7	1099.58
8	1119.42
9	1126.88
10	1098.25
11	1049.25
12	1050.29
13	1047.33
14	1091.13
15	1108.38
16	1120.04

DAY AVERAGE DAILY POWER LEVEL
 (MWe-Net)

17	1107.00
18	1105.71
19	1103.42
20	1103.88
21	1117.75
22	1109.83
23	1100.00
24	935.04
25	1115.08
26	1122.50
27	1123.29
28	1121.79
29	1110.08
30	1119.29
31	NA

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH APRIL 1988

DOCKET NO. 50-361
UNIT NAME SONGS - 2
DATE 05/13/88
COMPLETED BY E. R. Siacor
TELEPHONE (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
42	880317	S	115.15	B	4	NA	NA	SG	Unit shutdown from 100% power for inspection and repairs to Steam Generator E-088 tube leaks.

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

⁴IEEE Std 805-1984

⁵IEEE Std 803A-1983

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO.	50-361
UNIT	SONGS - 2
DATE	05/13/88
COMPLETED BY	E. R. Siacor
TELEPHONE	(714) 368-6223

<u>Date</u>	<u>Time</u>	<u>Event</u>
April 1	0001	Unit is in Mode 5. Steam Generator tube leak repairs in progress.
	1224	Entered Mode 4 following completion of Steam Generator tube leak repairs.
April 2	2311	Entered Mode 3.
April 4	1916	Entered Mode 2.
	2000	Reactor made critical.
April 5	0035	Entered Mode 1.
	1015	Unit synchronized to the grid.
	1155	Main Turbine tripped to allow installation of balancing weights.
	1812	Commenced main turbine startup following completion of turbine balancing.
	1909	Unit synchronized to the grid. Continuing power increase to 100% reactor power.
April 7	0608	Reactor at 100% power.
April 23	2230	Commenced reactor power reduction to 80% to perform heat treating of the circulating water intake tunnel.
April 24	0138	Reactor at 80% power.
	1430	Commenced reactor power increase to 100% following completion of heat treating operations.
	1725	Reactor at 100% power.
April 30	2400	Unit is in Mode 1 at 100% reactor power. Turbine load is 1156 MWe gross.

REFUELING INFORMATION

DOCKET NO. 50-361
UNIT SONGS - 2
DATE 05/13/88
COMPLETED BY E. R. Siacor
TELEPHONE (714) 368-6223

MONTH: April 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. Under Review
8. Projected date of last refueling that can be discharged to spent fuel storage pool assuming present capacity.
Approximately 1997 (refueling only)
Approximately 1993 (full off load capability)

NRC MONTHLY OPERATING REPORT

DOCKET NO.	50-362
UNIT	SONGS - 3
DATE	05/13/88
COMPLETED BY	E. R. Siacor
TELEPHONE	(714) 368-6223

OPERATING STATUS

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

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	719.00	2,903.00	35,783.00
12. Number Of Hours Reactor Was Critical	696.62	2,632.27	26,380.24
13. Reactor Reserve Shutdown Hours	0.00	0.00	0.00
14. Hours Generator On-Line	696.57	2,580.82	25,455.02
15. Unit Reserve Shutdown Hours	0.00	0.00	0.00
16. Gross Thermal Energy Generated (MWH)	2,323,149.53	8,593,478.45	78,194,874.27
17. Gross Electrical Energy Generated (MWH)	797,392.00	2,952,875.50	26,430,776.50
18. Net Electrical Energy Generated (MWH)	757,487.00	2,796,561.00	24,866,225.47
19. Unit Service Factor	96.88%	88.90%	71.14%
20. Unit Availability Factor	96.88%	88.90%	71.14%
21. Unit Capacity Factor (Using MDC Net)	97.55%	89.20%	64.34%
22. Unit Capacity Factor (Using DER Net)	97.55%	89.20%	64.34%
23. Unit Forced Outage Rate	0.00%	2.43%	8.85%
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>Cycle 4 refueling outage, April 30, 1988, 78 day duration now in progress.</u>			

25. If Shut Down At End Of Report Period, Estimated Date of Startup: July 16, 1988
 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 05/13/88
 COMPLETED BY E. R. Siacor
 TELEPHONE (714) 368-6223

MONTH April 1988

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1107.79</u>
2	<u>1112.21</u>
3	<u>1065.67</u>
4	<u>1111.58</u>
5	<u>1111.04</u>
6	<u>1111.58</u>
7	<u>1110.50</u>
8	<u>1107.63</u>
9	<u>1111.50</u>
10	<u>1112.25</u>
11	<u>1111.54</u>
12	<u>1111.63</u>
13	<u>1112.04</u>
14	<u>1112.42</u>
15	<u>1096.21</u>
16	<u>1110.17</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>1109.63</u>
18	<u>1086.50</u>
19	<u>1100.79</u>
20	<u>1107.42</u>
21	<u>1108.88</u>
22	<u>1098.88</u>
23	<u>1098.00</u>
24	<u>1086.33</u>
25	<u>1057.67</u>
26	<u>1071.25</u>
27	<u>1072.58</u>
28	<u>1070.08</u>
29	<u>798.50</u>
30	<u>0.00</u>
31	<u>NA</u>

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH APRIL 1988

DOCKET NO. 50-362
UNIT NAME SONGS - 3
DATE 05/13/88
COMPLETED BY E. R. Siacor
TELEPHONE (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
41	880430	S	22.43	C	1	NA	NA	NA	Cycle 4 refueling outage.

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

⁴IEEE Std 805-1984

⁵IEEE Std 803A-1983

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO.	50-362
UNIT	SONGS - 3
DATE	05/13/88
COMPLETED BY	E. R. Siacor
TELEPHONE	(714) 368-6223

<u>Date</u>	<u>Time</u>	<u>Event</u>
April 1	0001	Unit is in Mode 1 at 100% reactor power. Turbine load at 1170 MWe gross.
April 24	1940	Commenced power reduction to maintain required circulating water differential temperature.
	2055	Reactor at 94% power.
April 29	0010	Commenced power reduction for heat treating of the circulating intake tunnel and subsequent Cycle 4 refueling outage.
April 30	0115	Reactor at 20% power.
	0135	Turbine manually tripped.
	0137	Reactor manually tripped. Entered Mode 3.
	2400	Unit is in Mode 3 for the Cycle 4 refueling outage.

REFUELING INFORMATION

DOCKET NO.	50-362
UNIT	SONGS - 3
DATE	05/13/88
COMPLETED BY	E. R. Siacor
TELEPHONE	(714) 368-6223

MONTH: April 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. 160 irradiated fuel
49 new fuel
7. Licensed spent fuel storage capacity. 800
Intended change in spent fuel storage capacity. Under Review
8. Projected date of last refueling that can be discharged to spent fuel storage pool assuming present capacity.
Approximately 1997 (refueling only)
Approximately 1993 (full off load capability)



Southern California Edison Company

SAN ONOFRE NUCLEAR GENERATING STATION

P. O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

H. E. MORGAN
STATION MANAGER

May 13, 1988

TELEPHONE
(714) 368-6241

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

Subject: Docket Nos. 50-361/50-362
Monthly Operating Reports for April 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,

HEMorg —

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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