

Southern California Edison Company

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IRVINE, CALIFORNIA 92718

May 14, 1993

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ASSISTANT MANAGER,
NUCLEAR REGULATORY AFFAIRS

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

Subject: Docket Nos. 50-361 and 50-362
Monthly Operating Reports for April 1993
San Onofre Nuclear Generating Station, Units 2 and 3

Technical Specification 6.9.1.10 to Facility Operating Licenses NPF-10 and NPF-15 for the San Onofre Nuclear Generating Station, Units 2 and 3, respectively, requires SCE to provide a Monthly Operating Report for each Unit, which includes: routine operating statistics and shutdown experience; all challenges to safety valves; any changes to the Offsite Dose Calculation Manual (ODCM); and any major changes to the radioactive waste treatment system. All covered activities are reported monthly, except for ODCM changes, which are reported within 90 days from the time the changes were made effective.

This letter transmits the April 1993 Monthly Operating Reports for Units 2 and 3, respectively. There were no challenges to safety valves, no changes to the ODCM, and no major changes to the Units 2 and 3 radioactive waste treatment systems during the reporting period.

If you require any additional information, please let me know.

Sincerely,

Walter C. Marsh

Enclosures

cc: J. B. Martin (Regional Administrator, USNRC Region V)
M. B. Fields (NRC Project Manager, Units 2 and 3)
C. W. Caldwell (USNRC Senior Resident Inspector, Units 1, 2 and 3)

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NRC MONTHLY OPERATING REPORT

DOCKET NO: 50-361
 UNIT NAME: SONGS - 2
 DATE: MAY 14 1993
 COMPLETED BY: J. L. Darling
 TELEPHONE: (714) 368-6223

OPERATING STATUS

1.	Unit Name: San Onofre Nuclear Generating Station, Unit 2		
2.	Reporting Period: April 1993		
3.	Licensed Thermal Power (Mwt):	3396	
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	719.00	2,879.00	85,056.00
12. Number Of Hours Reactor Was Critical	719.00	2,879.00	63,613.36
13. Reactor Reserve Shutdown Hours	0.00	0.00	0.00
14. Hours Generator On-Line	719.00	2,879.00	62,536.27
15. Unit Reserve Shutdown Hours	0.00	0.00	0.00
16. Gross Thermal Energy Generated (MWH)	2,359,616.90	9,487,287.26	204,307,135.58
17. Gross Electrical Energy Generated (MWH)	807,259.50	3,207,325.50	69,252,885.50
18. Net Electrical Energy Generated (MWH)	768,554.00	3,052,827.00	65,660,342.83
19. Unit Service Factor	100.00%	100.00%	73.52%
20. Unit Availability Factor	100.00%	100.00%	73.52%
21. Unit Capacity Factor (Using MDC Net)	99.90%	99.10%	72.15%
22. Unit Capacity Factor (Using DER Net)	99.90%	99.10%	72.15%
23. Unit Forced Outage Rate	0.00%	0.00%	6.58%
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): Refueling shutdown, June 5, 1993, Duration (77 days)			
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	NA		NA
INITIAL ELECTRICITY	NA		NA
COMMERCIAL OPERATION	NA		NA

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO: 50-361
 UNIT NAME: SONGS - 2
 DATE: MAY 14 1993
 COMPLETED BY: J. L. Darling
 TELEPHONE: (714) 368-6223

MONTH: April 1993

DAY AVERAGE DAILY POWER LEVEL
 (MWe-Net)

1	1088.67
2	1052.08
3	790.63
4	817.92
5	1091.63
6	1095.38
7	1095.83
8	1097.08
9	1094.92
10	1086.79
11	1092.42
12	1089.54
13	1093.04
14	1094.54
15	1093.21

DAY AVERAGE DAILY POWER LEVEL
 (MWe-Net)

16	1085.92
17	1091.42
18	1093.17
19	1090.29
20	1089.21
21	1087.67
22	1088.75
23	1077.38
24	1084.33
25	1085.00
26	1084.63
27	1086.29
28	1086.13
29	1078.83
30	1040.42

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: April 1993DOCKET NO: 50-361UNIT NAME: SONGS - 2DATE: MAY 14 1993COMPLETED 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
82	930402	S	NA	B	5	NA	KE	COND	Unit load reduced to allow circulating water system heat treat and other reduced load work.

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
DATE:	MAY 14 1993
COMPLETED BY:	J. L. Darling
TELEPHONE:	(714) 368-6223

<u>Date</u>	<u>Time</u>	<u>Event</u>
April 1	0001	Unit is in Mode 1, 100% reactor power, 1140 MWe.
April 2	1915	Commenced reactor power decrease to 80% to perform circulating water system heat treat.
	2200	Unit at 80% Rx power
April 3	1049	Commenced reactor power decrease to 75% following completion of heat treat to allow circulating water pump work.
	1147	Unit at 75% reactor power.
April 4	0100	All clocks adjusted ahead one hour to conform to Pacific Daylight Savings time.
	1747	Commenced load increase to 100% reactor power following completion of circulating water pump work.
April 5	0100	Unit is at 100% reactor power, 1134 MWe.
April 29	0128	Main turbine HP stop valve 2200D closed. Manual Control of Steam Bypass Control system used to stabilize RCS temperature.
	0240	Commenced load increase to 100% from 1000 MWe following the return to service of HP stop valve 2200D. No problems were identified during inspection of stop valve.
	0322	Unit load at 100% reactor power, 1137 MWe.
April 30	2400	Unit at 100% reactor power, 1135 MWe.

REFUELING INFORMATION

DOCKET NO: 50-361
UNIT NAME: SONGS - 2
DATE: MAY 14 1993
COMPLETED BY: J. L. Darling
TELEPHONE: (714) 368-6223

MONTH: April 1993

1. Scheduled date for next refueling shutdown.

Cycle 7 refueling outage is forecast for June 5, 1993.

2. Scheduled date for restart following refueling.

Restart from Cycle 7 refueling outage is forecast for August 1993.

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

Yes.

What will these be?

The following Technical Specification changes are desired in support of work being performed during the Unit 2 Cycle 7 refueling outage.

- A. A change to Technical Specification 3.9.7 has been requested to permit use of the cask pool cover to support refueling activities. This cover had previously been used to support the spent fuel pool reracking project. NRC approval of this change will be required prior to the start of the outage to support use of the cover during the outage.
- B. A change has been requested to Technical Specification 4.4.5.2.1 to allow a delay in performing an RCS inventory balance during plant transients. Although not required, NRC approval of this change is desired prior to startup from the Unit 2 Cycle 7 outage.
- C. 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 2 Cycle 7 outage.

REFUELING INFORMATION

DOCKET NO: 50-361
UNIT NAME: SONGS - 2
DATE: MAY 14 1993
COMPLETED BY: J. L. Darling
TELEPHONE: (714) 368-6223

MONTH: April 1993

- D. A license Amendment and Technical Specification change has been requested to permit implementation of a design change to use the containment spray pumps for shutdown cooling and spent fuel pool cooling. NRC approval of this change will be requested to permit use of the spray pumps for spent fuel pool cooling during the Unit 2 cycle 7 outage.
 - E. A one-time change has been requested to Technical Specification 4.8.1.1.1 to permit replacement of transformers on the 480 Volt buses during the Cycle 7 outage. These buses affect the crosstie between the units which provides the second source of offsite power. Because the bus will be out of service for longer than 72 hours, the maintenance work on the shut down unit could affect the operating unit.
4. Scheduled date for submitting proposed licensing action and supporting information.
- A. Proposed Change on Cask Pool Cover Submitted December 24, 1992
 - B. Proposed Change on RCS Leakrate Submitted November 20, 1992
 - C. Proposed Change on MSSVs Submitted March 5, 1993
 - D. Proposed Change on Spray Pumps Submitted December 24, 1992
 - E. Proposed Change on 480 Volt buses Submitted April 13, 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.

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6. The number of fuel assemblies.

a) In the core. 217

b) In the spent fuel storage pool. 554 (484 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 2001 (full off-load capability)

NRC MONTHLY OPERATING REPORT

DOCKET NO: 50-362
 UNIT NAME: SONGS - 3
 DATE: MAY 1 1993
 COMPLETED BY: J. L. Darling
 TELEPHONE: (714) 368-6223

OPERATING STATUS

1. Unit Name: San Onofre Nuclear Generating Station, Unit 3
2. Reporting Period: April 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	719.00	2,879.00	79,607.00
12. Number Of Hours Reactor Was Critical	719.00	2,822.97	62,022.73
13. Reactor Reserve Shutdown Hours	0.00	0.00	0.00
14. Hours Generator On-Line	719.00	2,799.50	60,405.56
15. Unit Reserve Shutdown Hours	0.00	0.00	0.00
16. Gross Thermal Energy Generated (MWH)	2,362,166.00	9,228,738.20	193,862,812.44
17. Gross Electrical Energy Generated (MWH)	815,293.50	3,161,300.00	65,788,160.00
18. Net Electrical Energy Generated (MWH)	775,499.00	3,001,765.00	62,147,435.36
19. Unit Service Factor	100.00%	97.24%	75.88%
20. Unit Availability Factor	100.00%	97.24%	75.88%
21. Unit Capacity Factor (Using MDC Net)	99.87%	96.54%	72.29%
22. Unit Capacity Factor (Using DER Net)	99.87%	96.54%	72.29%
23. Unit Forced Outage Rate	0.00%	2.76%	7.25%
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): Refueling shutdown, October 9, 1993, duration 85 days.			
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	NA	NA	
INITIAL ELECTRICITY	NA	NA	
COMMERCIAL OPERATION	NA	NA	

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO: 50-362
UNIT NAME: SONGS - 3
DATE: MAY 14 1993
COMPLETED BY: J. L. Darling
TELEPHONE: (714) 368-6223

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

1	1107.79
2	1102.42
3	1107.08
4	1105.50
5	1104.79
6	1102.63
7	1103.58
8	1103.33
9	1098.58
10	1102.38
11	1102.38
12	1101.13
13	1101.83
14	1102.38
15	1101.25

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

16	1098.50
17	1086.13
18	1093.75
19	1095.33
20	1094.25
21	1092.42
22	1094.92
23	1085.58
24	810.58
25	784.21
26	1070.25
27	1099.38
28	1102.38
29	1102.71
30	1055.04

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: April 1993DOCKET NO: 50-362UNIT NAME: SONGS - 3DATE: MAY 14 1993COMPLETED 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
75	930423	S	0.0	H	5	NA	KE	COND	Unit load reduced to allow circulating water system heat treat and other reduced load work.

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: 50-362
UNIT NAME: SONGS - 3
DATE: MAY 14 1993
COMPLETED BY: J. L. Darling
TELEPHONE: (714) 368-6223

<u>Date</u>	<u>Time</u>	<u>Event</u>
April 1	0001	Unit is at 100% reactor power, 1153 MWe.
April 4	0100	All clocks adjusted ahead one hour to conform to Pacific Daylight Savings time.
April 23	2200	Commenced load decrease to 80% to perform circulating water system heat treat.
April 24	0200	Unit is at 80% reactor power.
	1415	Commenced reactor power decrease to 75% following completion of heat treat to allow cleaning condenser water boxes.
	1520	Unit is at 75% reactor power.
April 26	0110	Commenced unit load increase to 100% following the completion of water box cleaning.
	0515	Unit is at 100% reactor power, 1155 MWe.
April 30	2400	Unit is at 100% reactor power, 1148 MWe.

REFUELING INFORMATION

DOCKET NO: 50-362
UNIT NAME: SONGS - 3
DATE: MAY 14 1993
COMPLETED BY: J. L. Darling
TELEPHONE: (714) 368-6223

MONTH: April 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 December 1993.

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

Yes.

What will these be?

The following Technical Specification changes are desired in support of work being performed during the Unit 3 Cycle 7 refueling outage.

- A. A change to Technical Specification 3.9.7 has been requested to permit use of the cask pool cover to support refueling activities. This cover had previously been used to support the spent fuel pool reracking project. NRC approval of this change will be required prior to the start of the outage to support use of the cover during the outage.
- B. A change has been requested to Technical Specification 4.4.5.2.1 to allow a delay in performing an RCS inventory balance during plant transients. Although not required, NRC approval of this change is desired prior to startup from the Unit 3 Cycle 7 outage.
- C. 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.

REFUELING INFORMATION

DOCKET NO: 50-362
UNIT NAME: SONGS - 3
DATE: MAY 14 1993
COMPLETED BY: J. L. Darling
TELEPHONE: (714) 368-6223

MONTH: April 1993

- D. A license Amendment and Technical Specification change has been requested to permit implementation of a design change to use the containment spray pumps for shutdown cooling and spent fuel pool cooling. NRC approval of this change will be requested to permit use of the spray pumps for spent fuel pool cooling during the Unit 3 cycle 7 outage.
 - E. A one-time change has been requested to Technical Specification 4.8.1.1.1 to permit replacement of transformers on the 480 Volt buses during the Cycle 7 outage. These buses affect the crosstie between the units which provides the second source of offsite power. Because the bus will be out of service for longer than 72 hours, the maintenance work on the shut down unit could affect the operating unit.
4. Scheduled date for submitting proposed licensing action and supporting information.
- A. Proposed Change on Cask Pool Cover Submitted December 24, 1992
 - B. Proposed Change on RCS Leakrate Submitted November 20, 1992
 - C. Proposed Change on MSSVs Submitted March 5, 1993
 - D. Proposed Change on Spray Pumps Submitted December 24, 1992
 - E. Proposed Change on 480 Volt buses Submitted April 13, 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.

Document Control Desk

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 2003 (full off-load capability)