



SOUTHERN CALIFORNIA  
**EDISON**

An EDISON INTERNATIONAL Company

December 13, 1996

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

Gentlemen:

Subject: Docket Nos. 50-361 and 50-362  
Monthly Operating Reports for November 1996  
San Onofre Nuclear Generating Station, Units 2 and 3

Technical Specification 5.7.1.4 of Facility Operating Licenses NPF-10 and NPF-15 for the San Onofre Nuclear Generating Station, Units 2 and 3, respectively, requires Edison to provide a Monthly Operating Report for each Unit, which includes: operating statistics and shutdown experience, including documentation of all challenges to pressurizer safety valves. This letter transmits the November 1996 Monthly Operating Reports for Units 2 and 3. There were no challenges to the pressurizer safety valves.

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

Sincerely,

Gregory T. Gibson  
Manager, Compliance

Enclosures

cc: L. J. Callan, Regional Administrator, NRC Region IV  
J. E. Dyer, Director, Division of Reactor Projects, NRC  
Region IV  
K. E. Perkins, Jr., Director, Walnut Creek Field Office, NRC  
Region IV  
M. B. Fields, NRC Project Manager, Units 2 and 3  
J. A. Sloan, Senior NRC Resident Inspector, San Onofre Units  
2 & 3

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

DOCKET NO: 50-361  
UNIT NAME: SONGS - 2  
DATE: December 13, 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: November 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>720.00</u>	<u>8,040.00</u>	<u>116,497.00</u>
12. Number Of Hours Reactor Was Critical	<u>696.72</u>	<u>8,016.72</u>	<u>91,404.91</u>
13. Reactor Reserve Shutdown Hours	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
14. Hours Generator On-Line	<u>696.68</u>	<u>8,016.68</u>	<u>89,846.99</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>2,312,994.12</u>	<u>26,608,748.85</u>	<u>294,246,763.60</u>
17. Gross Electrical Energy Generated (MWH)	<u>780,200.50</u>	<u>8,980,891.00</u>	<u>99,682,773.50</u>
18. Net Electrical Energy Generated (MWH)	<u>741,618.37</u>	<u>8,550,231.93</u>	<u>94,592,823.84</u>
19. Unit Service Factor	<u>96.76%</u>	<u>99.71%</u>	<u>77.12%</u>
20. Unit Availability Factor	<u>96.76%</u>	<u>99.71%</u>	<u>77.12%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>96.26%</u>	<u>99.39%</u>	<u>75.89%</u>
22. Unit Capacity Factor (Using DER Net)	<u>96.26%</u>	<u>99.39%</u>	<u>75.89%</u>
23. Unit Forced Outage Rate	<u>0.00%</u>	<u>0.00%</u>	<u>4.79%</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>Cycle 9 Refueling Outage commenced November 30, 1996</u>			
25. If Shutdown At End Of Report Period, Estimated Date of Startup:		<u>February 8, 1997</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: December 13, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

MONTH: November 1996

DAY	AVERAGE DAILY POWER LEVEL (Mwe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>1090.05</u>	16	<u>1085.55</u>
2	<u>1089.38</u>	17	<u>1084.09</u>
3	<u>1087.47</u>	18	<u>1086.26</u>
4	<u>1087.97</u>	19	<u>1089.43</u>
5	<u>1087.84</u>	20	<u>1087.68</u>
6	<u>1069.84</u>	21	<u>1087.63</u>
7	<u>1069.13</u>	22	<u>1085.55</u>
8	<u>1068.68</u>	23	<u>1081.51</u>
9	<u>1067.76</u>	24	<u>1071.97</u>
10	<u>1083.01</u>	25	<u>1058.68</u>
11	<u>1087.93</u>	26	<u>1044.76</u>
12	<u>1087.59</u>	27	<u>1032.47</u>
13	<u>1087.30</u>	28	<u>1020.63</u>
14	<u>1086.09</u>	29	<u>778.59</u>
15	<u>1086.01</u>	30	<u>0.00</u>

## UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: November 1996DOCKET NO: 50-361UNIT NAME: SONGS - 2DATE: December 13, 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
101	11/30/96	S	23.28	C	2	NA	N/A	N/A	Cycle 9 Refueling Outage

<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: December 13, 1996  
 COMPLETED BY: C. E. Williams  
 TELEPHONE: (714) 368-6707

<u>Date</u>	<u>Time</u>	<u>Event</u>
November 01	0000	Unit is in Mode 1, reactor power 99.3%, 1140 MWe.
November 28	2010	Commenced reducing reactor power to 79% power, to perform circulating water system heat treatment.
November 29	0305	Stopped reducing reactor power at 81.% to perform excore instrumentation calibration.
	0532	Continued reducing reactor power to 79%.
	0630	Reactor power at 79%.
	1200	Commenced reducing reactor power to 75% to remove circulating water pump from service.
	1530	Reactor power at 75%.
	2145	Commenced reducing reactor power for cycle 9 refueling outage.
November 30	0041	Main Turbine output breakers opened, commenced unit 2 Cycle 9 refueling outage.
	0043	Reactor manually tripped at 16% power. Unit is in Mode 3.
	1114	Unit entered Mode 4.
	2400	Unit is in Mode 4, Cycle 9 refueling outage is in progress.

# REFUELING INFORMATION

DOCKET NO: 50-361  
UNIT NAME: SONGS - 2  
DATE: December 13, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

MONTH: November 1996

1. Scheduled date for next refueling shutdown:  
Cycle 9 refueling outage commenced November 30, 1996.
2. Scheduled date for restart following refueling:  
Restart from Cycle 9 refueling outage is forecast for February 8, 1997.
3. Will refueling or resumption of operation thereafter require a Technical Specification change or other license amendment?  
  
Yes.  
  
What will these be?
  1. Revision to test interval of load sequencing relays.
  2. Appendix J Option B Technical Specification.
4. Scheduled date for submitting proposed licensing action and supporting information.
  1. PCN 454 Load Sequencing Relays Submitted 5/29/96
  2. PCN 361 Appendix J Option B Submitted 5/30/96
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 (continued)

DOCKET NO: 50-361  
UNIT NAME: SONGS - 2  
DATE: December 13, 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. 870 Total Fuel Assemblies  
700 Unit 2 Spent Fuel Assemblies  
100 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.

January 2006 (assuming 22 month fuel cycles for all future cycles, and unit 1 fuel remains where it is currently located).



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

DOCKET NO: 50-362  
UNIT NAME: SONGS - 3  
DATE: December 13, 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: November 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>720.00</u>	<u>8,040.00</u>	<u>111,048.00</u>
12. Number Of Hours Reactor Was Critical	<u>720.00</u>	<u>7,611.48</u>	<u>89,548.18</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>7,567.67</u>	<u>87,787.31</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>2,366,451.65</u>	<u>25,142,938.56</u>	<u>283,642,437.96</u>
17. Gross Electrical Energy Generated (MWH)	<u>801,454.50</u>	<u>8,475,107.50</u>	<u>96,234,577.50</u>
18. Net Electrical Energy Generated (MWH)	<u>761,507.37</u>	<u>8,034,192.58</u>	<u>90,973,556.14</u>
19. Unit Service Factor	<u>100.00%</u>	<u>94.13%</u>	<u>79.05%</u>
20. Unit Availability Factor	<u>100.00%</u>	<u>94.13%</u>	<u>79.05%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>97.93%</u>	<u>92.53%</u>	<u>75.85%</u>
22. Unit Capacity Factor (Using DER Net)	<u>97.93%</u>	<u>92.53%</u>	<u>75.85%</u>
23. Unit Forced Outage Rate	<u>0.00%</u>	<u>0.00%</u>	<u>5.14%</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>Refueling shutdown, April 5, 1997, 70 days</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: December 13, 1996  
 COMPLETED BY: C. E. Williams  
 TELEPHONE: (714) 368-6707

MONTH: November 1996

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

1	<u>682.13</u>
2	<u>1066.97</u>
3	<u>1082.97</u>
4	<u>1082.63</u>
5	<u>1082.84</u>
6	<u>1081.93</u>
7	<u>1081.22</u>
8	<u>1080.93</u>
9	<u>1080.38</u>
10	<u>1080.63</u>
11	<u>1079.68</u>
12	<u>1079.55</u>
13	<u>1078.26</u>
14	<u>1071.34</u>
15	<u>1072.88</u>

DAY AVERAGE DAILY POWER LEVEL  
(MWe-Net)

16	<u>1080.05</u>
17	<u>1079.13</u>
18	<u>1020.09</u>
19	<u>1031.93</u>
20	<u>1084.13</u>
21	<u>1083.34</u>
22	<u>1078.34</u>
23	<u>897.53</u>
24	<u>1084.80</u>
25	<u>1085.18</u>
26	<u>1084.55</u>
27	<u>1084.13</u>
28	<u>1083.68</u>
29	<u>1083.55</u>
30	<u>1084.63</u>

# UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: November 1996

DOCKET NO: 50-362  
 UNIT NAME: SONGS - 3  
 DATE: December 13, 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
94	11/01/96	F	30.0	A	5	N/A	AA	ROD	Recovery from a dropped Control Element Assembly.

<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: December 13, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

<u>Date</u>	<u>Time</u>	<u>Event</u>
November 01	0000	Unit is in Mode 1, 43% reactor power, 425 MWe. Unit is recovering from a dropped Control Element Assembly.
	0312	Commenced raising reactor power to 100% power after recovery from a dropped Control Element Assembly.
	1500	Reactor power increase halted at 75% to perform excore instrumentation calibration.
	1900	Continued reactor power increase to 100% power.
November 02	0600	Reactor power at 97%, 1120 MWe.
November 18	1838	Commenced reducing reactor power to 75% due to seaweed influx and requirement to secure a circulating water pump due to high d/p on the associated condenser waterbox.
	2033	Reactor power at 77%.
November 19	0115	Commenced raising reactor power to 100% after circulating pump return to service.
	0811	Reactor power at 99%, 1132 MWe.
November 22	2235	Commenced reducing power to 80% to perform circulating water system heat treatment.
November 23	0140	Reactor power at 80%.
	1539	Commenced raising reactor power to 100%.
	1830	Reactor at 99.2% power, 1133 MWe.
November 31	2400	Unit is in Mode 1, reactor power 99.4%, 1133 MWe.

# REFUELING INFORMATION

DOCKET NO: 50-362  
UNIT NAME: SONGS - 3  
DATE: December 13, 1996  
COMPLETED BY: C. E. Williams  
TELEPHONE: (714) 368-6707

MONTH: November 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 14, 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. Implementation of barrier control program.
3. Revision to Containment Isolation Valve action statement.
4. Increase in Low Pressure Safety Injection AOT

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

- |  |                   |
|--|-------------------|
| 1. PCN 453 Diesel Generator AOT              | Submitted 11/2/95 |
| 2. PCN 467 Barrier Control Program           | Submitted 5/09/96 |
| 3. PCN 460 Containment Isolation Valves      | Submitted 4/11/96 |
| Supplement                                   | Forecast 1/31/97  |
| 4. PCN 452 Low Pressure Safety Injection AOT | Submitted 11/8/95 |

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: 50-362  
UNIT NAME: SONGS - 3  
DATE: December 13, 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.

May 2006 (full off-load capability assuming 22 month fuel cycles for all future cycles, and unit 1 fuel remains where it is currently located).