

Arizona Public Service Company

PALO VERDE NUCLEAR GENERATING STATION
P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

182-06068-JML/JLT/JDF

May 9, 1995

JAMES M. LEVINE
VICE PRESIDENT
NUCLEAR PRODUCTION

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-37
Washington, DC 20555

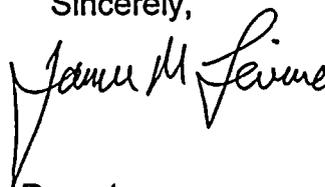
Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2, and 3
Docket Nos. STN 50-528/529/530
Monthly Operating Reports for April 1995**

Enclosed are the Monthly Operating Reports for April 1995, prepared and submitted pursuant to Specification 6.9.1.6 of Appendix A (Technical Specifications) to the PVNGS Units 1, 2, and 3 Operating Licenses. By copy of this letter, Arizona Public Service Company is also forwarding the Monthly Operating Reports to the Regional Administrator, NRC Region IV.

If you have any questions, please contact Judy Fulton at (602) 393-5277.

Sincerely,



JML/JDF/gez

Enclosures: March 1995 Monthly Operating Reports

cc: L. J. Callan (all w/enclosures)
K. E. Perkins
NRC Senior Resident Inspector
INPO Records Center
Utility Data Institute

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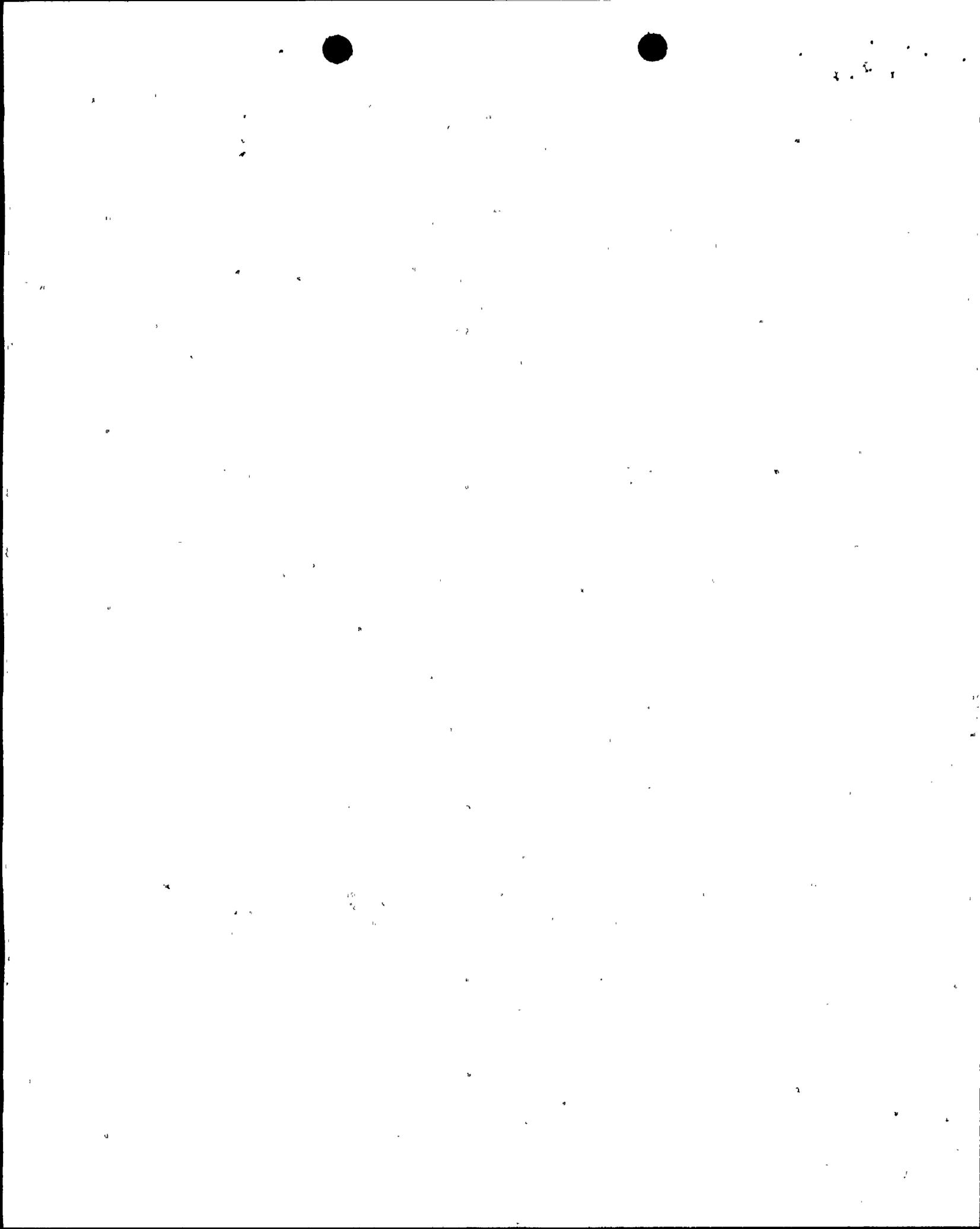
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NRC Monthly Operating Report
Distribution List

bcc:	J. A. Bailey	(7605) (all w/enclosures)
	R. J. Bouquot	(7996)
	B. J. Davis	(7646)
	W. Ferguson	(9816)
	B. A. Grabo	(7636)
	J. W. Hazelbaker	(7693)
	W. E. Ide	(7294)
	J. M. Levine	(7602)
	V. L. Mehrhof	(7712)
	W. W. Montefour	(7466)
	W. L. Stewart	(9082)



NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-528
 UNIT NAME PVNGS-1
 DATE 05/05/95
 COMPLETED BY J. D. Fulton
 TELEPHONE (602) 393-5277

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 1
2. Reporting Period: April 1995
3. Licensed Thermal Power (MWt): 3800
4. Nameplate Rating (Gross MWe): 1403
5. Design Electrical Rating (Net MWe): 1270
6. Maximum Dependable Capacity (Gross MWe): 1303
7. Maximum Dependable Capacity (Net MWe): 1221
8. If Changes Occur In Capacity Ratings (Item Numbers 3 Through 7) Since Last Report, Give Reasons: N/A
9. Power Level to Which Restricted, If Any (Net MWe): None
10. Reasons For Restrictions, If Any: N/A

Unit 1 Generating Statistics		This Month	Yr. to Date	Cumulative
11.	Hours in Reporting Period	720	2,880	81,120
12.	Hours Reactor was Critical	0.1	2,160.1	52,792.9
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14.	Hours Generator was On-Line	0.1	2,160.1	51,816.7
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	76	7,999,702	187,081,720
17.	Gross Electrical Energy Generated (MWH)	0	2,766,400	64,812,900
18.	Net Electrical Energy Generated (MWH)	0	2,610,540	60,841,446
19.	Unit Service Factor (%)	0.0%	75.0%	63.9%
20.	Unit Availability Factor (%)	0.0%	75.0%	63.9%
21.	Unit Capacity Factor (Using MDC Net)	0.0%	74.2%	61.4%
22.	Unit Capacity Factor (Using DER Net)	0.0%	71.4%	59.1%
23.	Unit Forced Outage Rate (%)	0.0%	0.0%	13.1%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date and Duration of Each): Refueling outage began on 4/1/95 with a 70 day duration.

25. If Shutdown At End of Report Period, Estimated Date of Start-up: 06/10/95

	Forecast	Achieved
INITIAL CRITICALITY	<u>05/85</u>	<u>05/25/85</u>
INITIAL ELECTRICITY	<u>06/85</u>	<u>06/10/85</u>
COMMERCIAL OPERATION	<u>11/85</u>	<u>01/28/86</u>



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AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 05/05/95
COMPLETED BY J. D. Fulton
TELEPHONE (602) 393-5277

MONTH: April 1995

DAY AVERAGE DAILY POWER LEVEL

1	1
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
15	0
16	0

DAY AVERAGE DAILY POWER LEVEL

17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	0
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REFUELING INFORMATION

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 05/05/95
COMPLETED BY J. D. Fulton
TELEPHONE (602) 393-5277

1. Scheduled date for next refueling shutdown.

The 5th refueling outage began on 04/01/95.

2. Scheduled date for restart following refueling.

06/10/95.

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

No

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

12/28/94

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, and new operating procedures.

The fuel assembly will utilize Erbium as a burnable absorber (as was done for Units 2 and 3).

6. The number of fuel assemblies.

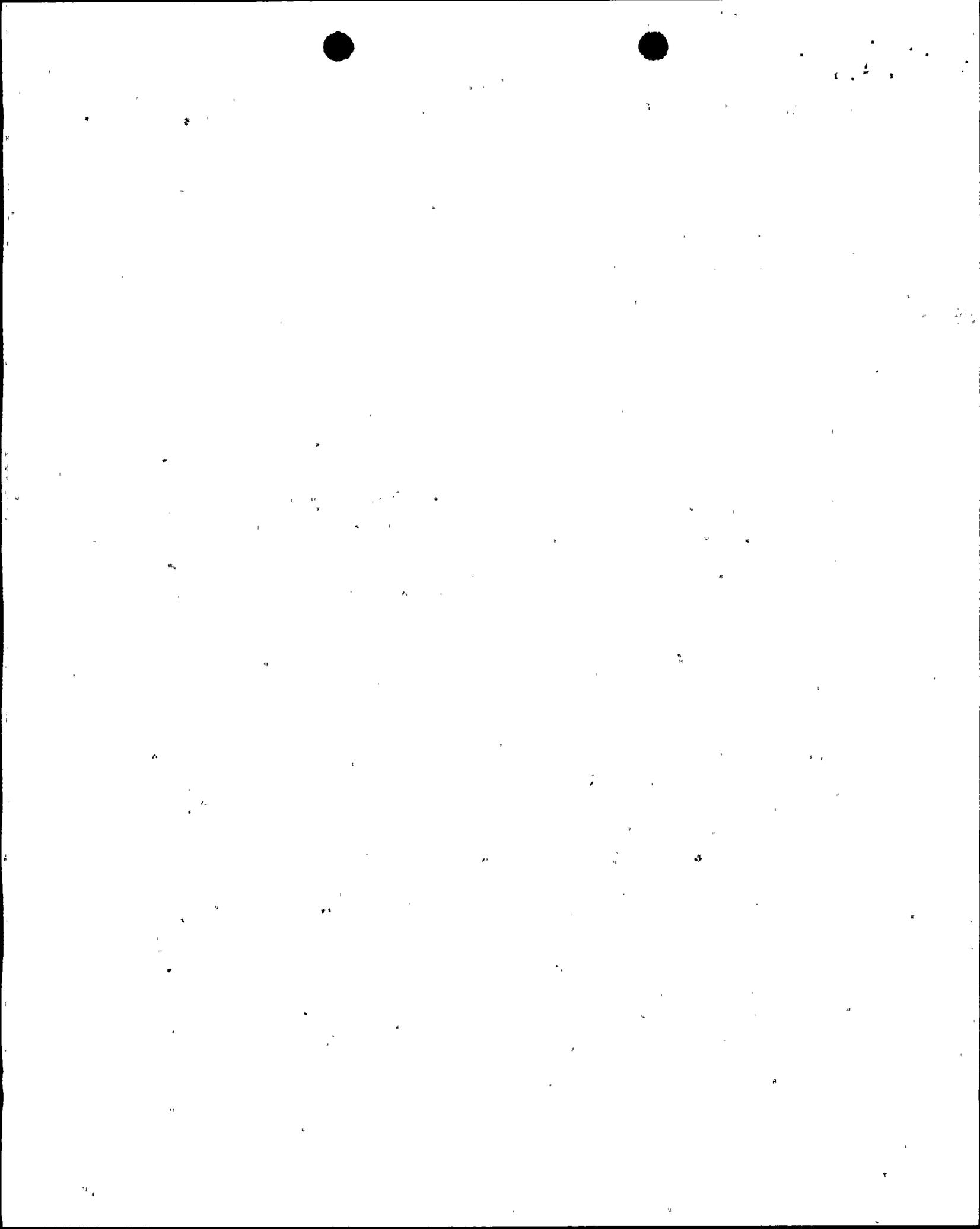
- a) In the core. 241
b) In the spent fuel storage pool. 456

7. Licensed spent fuel storage capacity. 1329

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.

2005 (18 Month reloads and full core discharge capability).



SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 05/05/95
COMPLETED BY J. D. Fulton
TELEPHONE (602) 393-5277

April 1995

04/01 0000 Unit began the month in Mode 1 reducing Rx power to 20% for the 6th refueling outage.
04/01 0006 Entered Mode 3. Tripped the Rx for normal shutdown, officially beginning 6th refueling outage.
04/01 0635 Entered Mode 4.
04/03 1008 Entered Mode 5.
04/06 2030 Entered Mode 6.
04/12 0034 Rx is defueled. Exited Mode 6.
04/27 0547 Entered Mode 6. Core reload.
04/30 2359 Unit ended the month in refueling outage Mode 6.

SHUTDOWNS AND POWER REDUCTIONS
April 1995

DOCKET NO 50-528
 UNIT NAME PVNGS-1
 DATE 05/05/95
 COMPLETED BY J. D. Fulton
 TELEPHONE (602)393-6221

No.	Date	Type ¹	Outage Duration Hours	Reason ²	Method of Shutting Down Reactor ³	LER No.	System Code ⁴	Component Code ⁵	Cause and Corrective Action to Prevent Occurrence
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No reactor shutdowns or significant power reductions occurred during the month of April, 1995.

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
 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
 9-Other-(Explain)

⁴Exhibit F - Instructions for Preparation of the Data Entry Sheets for Licensee Event Report (LER) File (NUREG 0161)

⁵Exhibit H-Same Source

NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-529
 UNIT NAME PVNGS-2
 DATE 05/05/95
 COMPLETED BY J. D. Fulton
 TELEPHONE (602) 393-5277

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 2
2. Reporting Period: April 1995
3. Licensed Thermal Power (MWt): 3800
4. Nameplate Rating (Gross MWe): 1403
5. Design Electrical Rating (Net MWe): 1270
6. Maximum Dependable Capacity (Gross MWe): 1303
7. Maximum Dependable Capacity (Net MWe): 1221
8. If Changes Occur In Capacity Ratings (Item Numbers 3 Through 7) Since Last Report, Give Reasons: N/A
9. Power Level to Which Restricted, If Any (Net MWe): None
10. Reasons For Restrictions, If Any: N/A

Unit 2 Generating Statistics		This Month	Yr. to Date	Cumulative
11.	Hours In Reporting Period	720	2,880	75,504
12.	Hours Reactor was Critical	720.0	1,627.1	52,278.8
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14.	Hours Generator was On-Line	720.0	1,579.5	51,180.4
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	2,599,838	5,742,628	185,986,535
17.	Gross Electrical Energy Generated (MWH)	900,800	1,982,900	64,714,370
18.	Net Electrical Energy Generated (MWH)	846,886	1,847,486	60,541,381
19.	Unit Service Factor (%)	100.0%	54.8%	67.8%
20.	Unit Availability Factor (%)	100.0%	54.8%	67.8%
21.	Unit Capacity Factor (Using MDC Net)	96.3%	52.5%	65.7%
22.	Unit Capacity Factor (Using DER Net)	92.6%	50.5%	63.1%
23.	Unit Forced Outage Rate (%)	0.0%	0.0%	5.9%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date and Duration of Each): N/A

25. If Shutdown At End of Report Period, Estimated Date of Start-up: N/A

	Forecast	Achieved
INITIAL CRITICALITY	<u>03/86</u>	<u>04/18/86</u>
INITIAL ELECTRICITY	<u>06/86</u>	<u>05/20/86</u>
COMMERCIAL OPERATION	<u>11/86</u>	<u>09/19/86</u>

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-529
 UNIT NAME PVNGS-2
 DATE 05/05/95
 COMPLETED BY J. D. Fulton
 TELEPHONE (602) 393-5277

MONTH: April 1995

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	823	17	1250
2	883	18	1249
3	1222	19	1249
4	1248	20	1250
5	1246	21	1251
6	1246	22	1251
7	1246	23	1250
8	1247	24	1251
9	1248	25	1252
10	1248	26	1250
11	980	27	1248
12	460	28	1248
13	1159	29	1246
14	1214	30	1242
15	1248	31	
16	1251		

REFUELING INFORMATION

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 05/05/95
COMPLETED BY J. D. Fulton
TELEPHONE (602) 393-5277

1. Scheduled date for next refueling shutdown.

The 6th refueling outage is scheduled for 03/16/96.

2. Scheduled date for restart following refueling.

05/10/96.

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

- a. Technical Specification change to Note 5 of Table 4.3-1 for the proposed installation of a cycle independent shape annealing matrix.

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

12/08/95.

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, and new operating procedures.

Stretch Power to 102%.

6. The number of fuel assemblies.

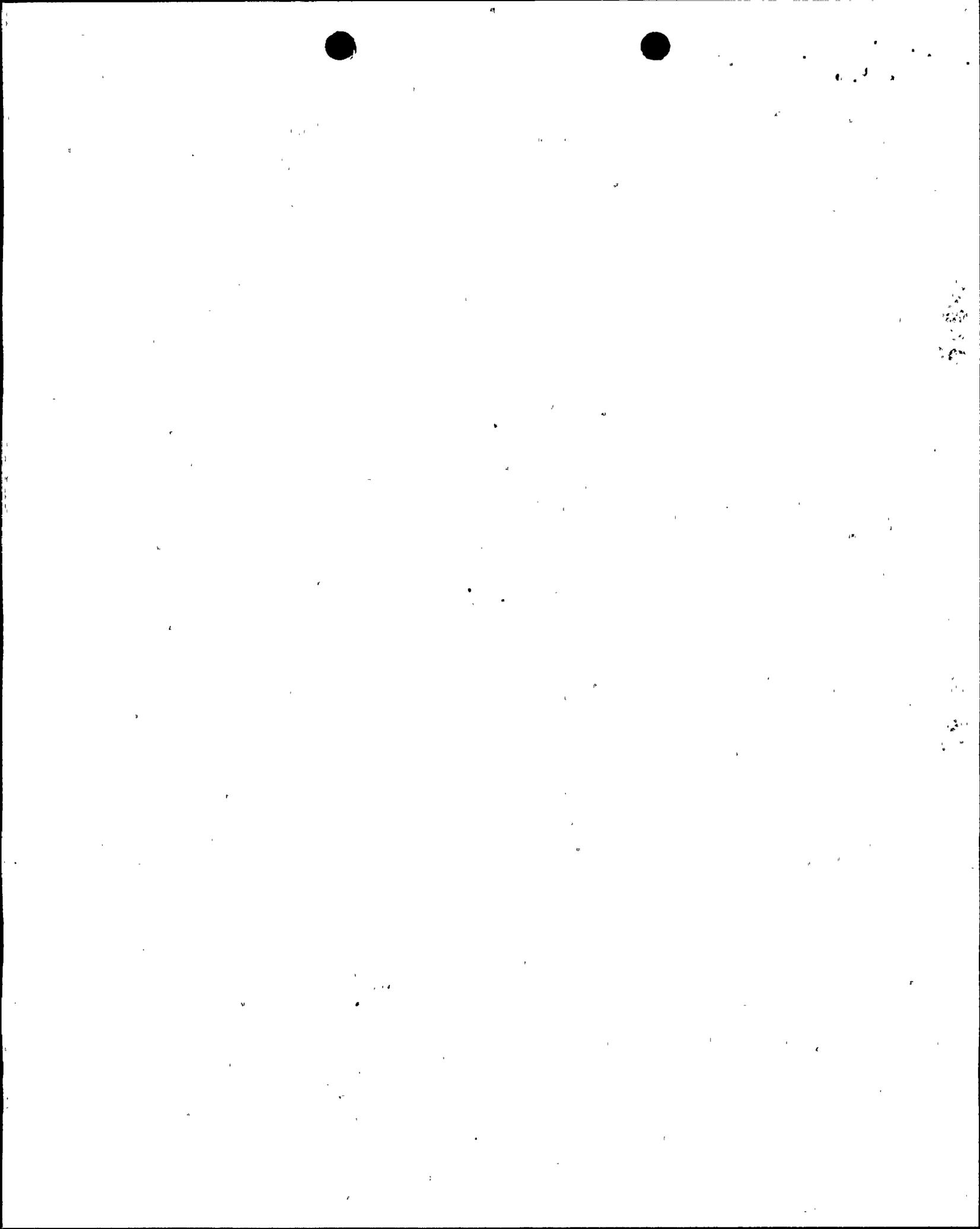
- a) In the core. 241
b) In the spent fuel storage pool. 384

7. Licensed spent fuel storage capacity. 1329

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.

2005 (18 Month reloads and full core discharge capability).



SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO. 50-529
 UNIT NAME PVNGS-2
 DATE 05/05/95
 COMPLETED BY J. D. Fulton
 TELEPHONE (602) 393-5277

April 1995

04/01 0000 Unit began the month in power ascension to 70%.

04/01 0345 Rx power stabilized at 69% JSCALOR for testing.

04/02 1649 Commenced Rx power increase from 69% to 100% after completion of the 70% power plateau physics testing.

04/03 0100 Stabilized Rx power at 90% for surveillance testing.

04/03 0235 Commenced Rx power ascension to 100% after completion of surveillance testing.

04/03 1500 Stopped power ascension, Rx stabilized at 100% power.

04/11 1435 Indication of CW leak from AB loop to 2C hotwell. Commenced Rx power decrease to 40% to isolate CW AB loop.

04/11 1750 Rx power stabilized at 40% for CW leak on AB loop.

04/12 2101 Commenced Rx power increase to 100%.

04/13 0300 Stopped Rx power increase at 96% due to SG#1 and SG#2 sulfates.

04/13 0435 Exited Action Level 1 for sulfates on SG#1 and SG#2.

04/13 0620 RX power increase stopped at 95% for FWP suction pressure condensate discharge pressure limit due to condensate pump out of service.

04/13 0840 Commenced RX power increase to 100%.

04/13 1042 Stopped Rx power increase at 97% due to Main feed pump suction pressure limitations.

04/15 0015 Commenced Rx power increase to 100%.

04/15 0115 Rx power stabilized at 100%. Maintaining MFWP suction pressure >300 psig. CD pump remains out of service.

04/15 0945 Rx power decreased to 99% for Hi Rate B/Ds.

04/15 1115 Rx power increased to 100%.

04/20 0924 Placed cond. demin. vessel C in service.

04/22 0216 Rx power decrease to 99% for Hi Rate B/Ds.

04/22 0330 Rx power increased to 100%.

04/30 2359 Unit ended the month in Mode 1 at 100% power.

SHUTDOWNS AND POWER REDUCTIONS
April 1995

DOCKET NO 50-529
 UNIT NAME PVNGS-2
 DATE 05/05/95
 COMPLETED BY J. D. Fulton
 TELEPHONE (602)393-6221

No.	Date	Type ¹	Outage Duration Hours	Reason ²	Method of Shutting Down Reactor ³	LER No.	System Code ⁴	Component Code ⁵	Cause and Corrective Action to Prevent Occurrence
95-02	04/11/95	F	82.7	A	5	N/A	N/A	N/A	Rx power reduced to 40% due to CW leak and condensate pump failure.

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
 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
 9-Other-(Explain)

⁴Exhibit F - Instructions for Preparation of the Data Entry Sheets for Licensee Event Report (LER) File (NUREG 0161)

⁵Exhibit H-Same Source



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NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-530
 UNIT NAME PVNGS-3
 DATE 05/05/95
 COMPLETED BY J. D. Fulton
 TELEPHONE (602) 393-5277

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 3
2. Reporting Period: April 1995
3. Licensed Thermal Power (MWT): 3800
4. Nameplate Rating (Gross MWe): 1403
5. Design Electrical Rating (Net MWe): 1270
6. Maximum Dependable Capacity (Gross MWe): 1303
7. Maximum Dependable Capacity (Net MWe): 1221
8. If Changes Occur In Capacity Ratings (Item Numbers 3 Through 7) Since Last Report, Give Reasons: N/A
9. Power Level to Which Restricted, If Any (Net MWe): None
10. Reasons For Restrictions, If Any: N/A

Unit 3 Generating Statistics	This Month	Yr. to Date	Cumulative
11. Hours in Reporting Period	720	2,880	64,080
12. Hours Reactor was Critical	720.0	2,880.0	47,894.0
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator was On-Line	720.0	2,880.0	47,227.5
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	2,735,334	10,894,624	172,671,557
17. Gross Electrical Energy Generated (MWH)	951,200	3,792,200	60,323,900
18. Net Electrical Energy Generated (MWH)	899,891	3,582,693	56,705,400
19. Unit Service Factor (%)	100.0%	100.0%	73.7%
20. Unit Availability Factor (%)	100.0%	100.0%	73.7%
21. Unit Capacity Factor (Using MDC Net)	102.4%	101.9%	72.5%
22. Unit Capacity Factor (Using DER Net)	98.4%	98.0%	69.7%
23. Unit Forced Outage Rate (%)	0.0%	0.0%	5.8%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date and Duration of Each): 6th Refueling Outage
 scheduled to begin 10/14/95.

25. If Shutdown At End of Report Period, Estimated Date of Start-up: N/A

	Forecast	Achieved
INITIAL CRITICALITY	<u>07/87</u>	<u>10/25/87</u>
INITIAL ELECTRICITY	<u>07/87</u>	<u>11/28/87</u>
COMMERCIAL OPERATION	<u>09/87</u>	<u>01/08/88</u>



AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-530
 UNIT NAME PVNGS-3
 DATE 05/05/95
 COMPLETED BY J. D. Fulton
 TELEPHONE (602) 393-5277

MONTH: April 1995

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	1255	17	1259
2	1255	18	1258
3	1254	19	1257
4	1256	20	1257
5	1256	21	1258
6	1255	22	1254
7	1256	23	1256
8	1253	24	1256
9	1256	25	1258
10	1259	26	1256
11	1258	27	1254
12	1257	28	1255
13	1256	29	1251
14	1256	30	1248
15	1255	31	
16	1257		



REFUELING INFORMATION

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 05/05/95
COMPLETED BY J. D. Fulton
TELEPHONE (602) 393-5277

1. Scheduled date for next refueling shutdown.

The 5th refueling outage is scheduled to begin 10/14/95.

2. Scheduled date for restart following refueling.

12/23/95.

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

- a. Technical Specification change to Note 5 of Table 4.3-1 for the proposed installation of a cycle independent shape annealing matrix. (submitted 12/7/94 to NRC).

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

Submittal is planned for June 1995 to revise the list of analytical methods in Technical Specification 6.9.1.10.

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, and new operating procedures.

None.

6. The number of fuel assemblies.

- a) In the core. 241
b) In the spent fuel storage pool. 380

7. Licensed spent fuel storage capacity. 1329

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.

2005 (18 Month reloads and full core discharge capability).



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SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 05/05/95
COMPLETED BY J. D. Fulton
TELEPHONE (602) 393-5277

April 1995

04/01	0000	Unit began the month in Mode 1 at 100% power.
04/08	0253	Rx power decreased to 99% for Hi Rate B/ds.
04/08	2213	Rx power increased to 100%.
04/16	0026	Rx power decreased to 99% for Hi Rate B/ds.
04/16	0237	Rx power increased to 100%.
04/22	1009	Rx power decreased to 99% for ADV testing.
04/22	1236	Rx power increased to 100%.
04/23	0050	Rx power decreased to 99% for Hi Rate B/ds.
04/23	0202	Rx power increased to 100%.
04/26	2149	Rx power decreased to 97% for control valve testing.
04/26	2230	Rx power increased to 100%.
04/30	0139	Rx power decreased to 99% for Hi Rate B/ds.
04/30	0331	Rx power increased to 100%.
04/30	2359	Unit ended the month in Mode 1 at 100% power.



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SHUTDOWNS AND POWER REDUCTIONS
April 1995

DOCKET NO 50-530
 UNIT NAME PVNGS-3
 DATE 05/05/95
 COMPLETED BY J. D. Fulton
 TELEPHONE (602)393-6221

No.	Date	Type ¹	Outage Duration Hours	Reason ²	Method of Shutting Down Reactor ³	LER No.	System Code ⁴	Component Code ⁵	Cause and Corrective Action to Prevent Occurrence
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No reactor shutdowns or significant power reductions occurred during the month of April, 1995

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
 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
 9-Other-(Explain)

⁴Exhibit F - Instructions for Preparation of the Data Entry Sheets for Licensee Event Report (LER) File (NUREG 0161)

⁵Exhibit H-Same Source

