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LEVINE,J.M. Arizona Public Service Co. (formerly Arizona Nuclear Power
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SUBJECT: Monthly operating repts for MAY 1992 for PVNGS Units 1,2 & 3.W/920613 ltr.

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RIDS/ADDS

Arizona Public Service Company
PALO VERDE NUCLEAR GENERATING STATION
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JAMES M. LEVINE
VICE PRESIDENT
NUCLEAR PRODUCTION

254-02075-JML/KAC
June 13, 1992

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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 May 1992
File: 92-024-404; 92-056-026

Enclosed are the Monthly Operating Reports for May 1992, 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 V.

If you have any questions, please contact Kent A. Chavet at (602) 340-4718.

Sincerely,

James M. Levine

JML/KAC/kac
Enclosures

cc: J. B. Martin (all w/enclosures)
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NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 1
2. Reporting Period: May 1992
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	744	3,648	55,584
12.	Hours Reactor was Critical	263.4	1,094.4	30,153.5
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14.	Hours Generator was On-Line	200.3	1,010.6	29,332.7
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	389,734	3,069,519	106,933,775
17.	Gross Electrical Energy Generated (MWH)	123,400	1,047,600	37,096,300
18.	Net Electrical Energy Generated (MWH)	94,846	952,330	34,777,122
19.	Unit Service Factor (%)	26.9%	27.7%	52.8%
20.	Unit Availability Factor (%)	26.9%	27.7%	52.8%
21.	Unit Capacity Factor (Using MDC Net)	10.4%	21.4%	51.2%
22.	Unit Capacity Factor (Using DER Net)	10.0%	20.6%	49.3%
23.	Unit Forced Outage Rate (%)	0.0%	21.2%	20.3%

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	05/85	05/25/85
INITIAL ELECTRICITY	06/85	06/10/85
COMMERCIAL OPERATION	11/85	01/28/86

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

MONTH: May 1992

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	0	17	0
2	0	18	0
3	0	19	0
4	0	20	0
5	0	21	0
6	0	22	0
7	0	23	0
8	0	24	124
9	0	25	235
10	0	26	467
11	0	27	500
12	0	28	813
13	0	29	822
14	0	30	795
15	0	31	837
16	0		

REFUELING INFORMATION

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

1. Scheduled date for next refueling shutdown.

   09/15/93, 4th refueling

2. Scheduled date for restart following refueling.

   11/24/93

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

   The need for a Technical Specification change or other license amendment has not yet been determined.

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

   N/A

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.

   N/A

6. The number of fuel assemblies.

   a) In the core. 241
   b) In the spent fuel storage pool. 267

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.

   2004 (18 Month reloads and full core discharge capability).

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

May 1992

05/01	0000	Unit began the month in Mode 5.
05/13	2337	Entered Mode 4.
05/14	0927	Entered Mode 3.
05/21	0034	Entered Mode 2.
05/23	0030	Entered Mode 1.
05/23	1243	Generator synchronized to the grid for turbine testing.
05/23	1718	Removed turbine/generator from the grid.
05/23	2018	Generator resynchronized to the grid. End of refueling outage.
05/31	2400	Unit ended the month in Mode 1, ascending to 100% from 82% reactor power.

SHUTDOWNS AND POWER REDUCTIONS
May 1992

DOCKET NO 50-528
UNIT NAME PVNGS-1
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

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 Recurrence
92-02	02/15/92	S	543.7	C	4	N/A	N/A	N/A	Continuation of the third refueling outage. Outage ended on May 23rd.

[1]F-Forced
S-Scheduled

[2]Reason:
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)

[3]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
9-Other-(Explain)

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

[5]Exhibit H-Same Source

NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 2
2. Reporting Period: May 1992
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	744	3,648	49,968
12.	Hours Reactor was Critical	744.0	3,381.3	34,727.1
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0
14.	Hours Generator was On-Line	744.0	3,255.5	33,969.8
15.	Unit Reserve Shutdown Hours	0.0	0.0	0
16.	Gross Thermal Energy Generated (MWH)	2,824,993	11,897,670	124,843,888
17.	Gross Electrical Energy Generated (MWH)	979,100	4,118,700	43,524,770
18.	Net Electrical Energy Generated (MWH)	922,494	3,856,740	40,746,955
19.	Unit Service Factor (%)	100.0%	89.2%	68.0%
20.	Unit Availability Factor (%)	100.0%	89.2%	68.0%
21.	Unit Capacity Factor (Using MDC Net)	101.5%	86.6%	66.8%
22.	Unit Capacity Factor (Using DER Net)	97.6%	83.2%	64.2%
23.	Unit Forced Outage Rate (%)	0.0%	5.8%	7.2%

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	03/86	04/18/86
INITIAL ELECTRICITY	06/86	05/20/86
COMMERCIAL OPERATION	11/86	09/19/86

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

MONTH: May 1992

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	1242	17	1245
2	1244	18	1243
3	1247	19	1238
4	1245	20	1238
5	1244	21	1244
6	1245	22	1246
7	1248	23	1247
8	1244	24	1247
9	1242	25	1244
10	1243	26	1244
11	1242	27	1243
12	1242	28	1242
13	1244	29	1243
14	1242	30	1231
15	1245	31	1246
16	1244		

REFUELING INFORMATION

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

1. Scheduled date for next refueling shutdown.

   03/15/93, 4th refueling

2. Scheduled date for restart following refueling.

   05/24/93

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

   Yes. A change to the moderator temperature coefficient curve in the Technical Specification is anticipated as a result of the next refueling.

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

   12/21/92

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.

   Minor modifications to the fuel pellet design (dimensional and density changes) will be incorporated into the Unit 2, Cycle 5 reload.

6. The number of fuel assemblies.

   a) In the core. 241
   b) In the spent fuel storage pool. 288

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.

   2004 (18 Month reloads and full core discharge capability).

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

May 1992

05/01	0000	Unit began the month in Mode 1; 100% RX power.
05/31	2400	Ended the month in Mode 1; 100% RX power.

SHUTDOWNS AND POWER REDUCTIONS
May 1992

DOCKET NO 50-529
UNIT NAME PVNGS-2
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

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 Recurrence

No reactor shutdowns or significant power reductions occurred during the month.

[1]F-Forced
S-Scheduled

[2]Reason:
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)

[3]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
9-Other-(Explain)

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

[5]Exhibit H-Same Source

NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 3
2. Reporting Period: May 1992
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	744	3,648	38,544
12.	Hours Reactor was Critical	562.4	3,434.2	27,431.9
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14.	Hours Generator was On-Line	546.5	3,408.9	27,008.3
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	1,853,795	12,669,532	99,180,941
17.	Gross Electrical Energy Generated (MWH)	644,500	4,441,600	34,760,300
18.	Net Electrical Energy Generated (MWH)	594,706	4,182,719	32,700,644
19.	Unit Service Factor (%)	73.5%	93.4%	70.1%
20.	Unit Availability Factor (%)	73.5%	93.4%	70.1%
21.	Unit Capacity Factor (Using MDC Net)	65.5%	93.9%	69.5%
22.	Unit Capacity Factor (Using DER Net)	62.9%	90.3%	66.8%
23.	Unit Forced Outage Rate (%)	26.5%	6.6%	8.9%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date and Duration of Each): Refueling outage, September 19, 1992, 80 days.

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

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

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

MONTH: May 1992

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	1259	17	863
2	1254	18	891
3	1258	19	1072
4	997	20	1250
5	855	21	1255
6	859	22	1259
7	43	23	1258
8	0	24	1258
9	0	25	1256
10	0	26	1254
11	0	27	1254
12	0	28	1254
13	0	29	1254
14	0	30	1254
15	66	31	1256
16	680		

REFUELING INFORMATION

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

1. Scheduled date for next refueling shutdown.

   09/19/92, 3rd refueling

2. Scheduled date for restart following refueling.

   11/28/92

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

   There are no Technical Specification changes associated with this reload.

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

   N/A

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.

   N/A

6. The number of fuel assemblies.

   a) In the core. 241
   b) In the spent fuel storage pool. 192

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. 50-530
UNIT NAME PVNGS-3
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

May 1992

05/01	0000	Unit began the month in Mode 1; 100% RX power.
05/04	0436	A 24 VDC alarm lead came in momentary contact with a 480 VAC electrical bus during the performance of an electrical work order to check alarm system continuity. The momentary contact resulted in the partial loss of the non-safety related annunciator system.
05/04	0749	Commenced RX downpower to 70% after the Core Operating Limit Supervisory System (COLSS) stopped calculating.
05/04	0819	The determination was made that the Plant Computer System had subsequently degraded to a point that the Emergency Plan was entered and an ALERT declared.
05/04	1021	RX at 70% power.
05/06	2321	The ALERT was terminated and the station exited the Emergency Plan as a result of the rework that had been completed on the Plant Annunciator System and the Plant Computer System. The determination was made by senior plant management to shut down the plant to perform additional testing needed to ensure long term reliability of these two systems.
05/06	2340	Commenced RX downpower at 10% per hour.
05/07	0419	Entered Mode 3 when RX was manually tripped from 20% power.
05/14	1757	Entered Mode 2.
05/15	0152	Entered Mode 1.
05/15	0952	Generator synchronized to the grid.
05/19	1530	RX power at 100%.
05/31	2400	Unit ended the month in Mode 1; 100% RX power.

SHUTDOWNS AND POWER REDUCTIONS
May 1992

DOCKET NO 50-530
UNIT NAME PVNGS-3
DATE 06/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

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 Recurrence
92-03	05/04/92	F	N/A	H	5	N/A	N/A	N/A	RX power decreased to 70%. Electrical short-circuit during continuity check of alarm system caused partial loss of the non-safety related annunciator system.
92-04	05/07/92	F	197.5	B	2	N/A	N/A	N/A	Senior plant management elected to shut down the reactor to perform additional testing needed to ensure long term reliability of the affected annunciator system a computer system.

[1]F-Forced
S-Scheduled

[2]Reason:
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)

[3]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
9-Other-(Explain)

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

[5]Exhibit H-Same Source