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SUBJECT: Monthly operating repts for Oct 1989 for Palo Verde Nuclear Generating Station,Units 1,2 & 3.W/891115 ltr.

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Arizona Public Service Company

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

ID# 254-00594-JML/KFP
November 15, 1989

Docket Nos. STN 50-528/529/530

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U. S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2 and 3
Monthly Operating Reports for October 1989
File: 89-024-404/89-056-026

Attached are the Monthly Operating Reports for October 1989 prepared and submitted pursuant to Specification 6.9.1.6 of Appendix A (Technical Specifications) to the Palo Verde Nuclear Generating Station, Units 1, 2 and 3 Operating Licenses. By copy of this letter, we are also forwarding the Monthly Operating Reports to the Regional Administrator of the Region V Office.

If you have any questions, please contact Mr. K. F. Porter, at (602) 371-4187.

Very truly yours,

J. M. Levine
Vice President
Nuclear Production

JML/KFP/kjr
Attachments

cc: M. J. Davis (all w/attachments)
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T. J. Polich
J. A. Amenta
INPO Records Center

IE24
1/1

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D. B. Andrews (6345)
R. A. Bernier (7048)
F. C. Buckingham (6451)
M. L. Clyde (6079)
K. B. Contois (6985)
B. S. Ecklund (7035)
R. E. Gouge (6486)
D. A. Hackbert (6795)
D. E. Hardy (8038)
D. R. Heinicke (6452)
W. E. Ide (6932)
J. R. LoCicero (6144)
W. C. Marsh (6123)
R. W. Page (7102)
K. F. Porter (7035)
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J. J. Scott (6428)
T. D. Shriver (6148)
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G. W. Sowers (6081)
C. R. Stevens (7006)
C. H. Teeter (7102)
P. L. Vogt (9184)
S. Lawson (7434)
R. E. Younger (6070)
D. Kahler (6345)
W. F. Conway (9012)
T. A. Cogburn (6102)
B. W. McCaskey (6086)
D. L. Metz (2208)
R. F. Schaller (6932)
R. D. Middleton (6451)
R. K. Flood (6452)
J. A. Bailey (6915)
J. W. Dennis (6123)

NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 1
2. Reporting Period: October 1989
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 (Items Number 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

	This Month	Yr.-to-Date	Cumulative
11. Hours in Reporting Period	744	7,296	32,952
12. Number of Hours Reactor Was Critical	0	1,522.0	17,262.1
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	0	1,522.0	16,826.9
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	0	5,565,298	60,931,221
17. Gross Electrical Energy Generated (MWH)	0	1,933,700	21,163,100
18. Net Electrical Energy Generated (MWH)	0	1,796,575	19,793,190.0
19. Unit Service Factor	0%	20.9%	51.1%
20. Unit Availability Factor	0%	20.9%	51.1%
21. Unit Capacity Factor (Using MDC Net)	0%	20.2%	49.2%
22. Unit Capacity Factor (Using DER Net)	0%	19.4%	47.3%
23. Unit Forced Outage Rate	0%	34.6%	28.1%

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 Startup: December 31, 1989

	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 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

MONTH: OCTOBER 1989

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	0
9	0	25	0
10	0	26	0
11	0	27	0
12	0	28	0
13	0	29	0
14	0	30	0
15	0	31	0
16	0		

REFUELING INFORMATION

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

1. Scheduled date for next refueling shutdown.

   08/11/91, 3rd refueling.

2. Scheduled date for restart following refueling.

   11/14/91

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

   To be determined.

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

   To be 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.

   The fuel vendor for the next reload will be Combustion Engineering.

6. The number of fuel assemblies

   a) In the core. 241

   b) In the spent fuel storage pool. 188

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 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

OCTOBER 1989

10/01	0000	Unit began month defueled, 2nd Refueling Outage.
10/31	2400	Unit ended month defueled.

SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

No.	Date	Type[1]	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
89/03	04/08/89	S	744	C	4	N/A	N/A	N/A	2nd refueling outage.

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 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 2
2. Reporting Period: October 1989
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 (Items Number 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

	This Month	Yr.-to-Date	Cumulative
11. Hours in Reporting Period	744	7,296	27,336
12. Number of Hours Reactor Was Critical	350.1	3,512.4	18,537.5
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	333.0	3,315.6	18,056.3
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1,205,545	12,154,843	66,081,620
17. Gross Electrical Energy Generated (MWH)	419,700	4,211,000	23,079,470
18. Net Electrical Energy Generated (MWH)	370,144	3,860,450	21,544,503
19. Unit Service Factor	44.8%	45.4%	66.1%
20. Unit Availability Factor	44.8%	45.4%	66.1%
21. Unit Capacity Factor (Using MDC Net)	40.7%	43.3%	64.5%
22. Unit Capacity Factor (Using DER Net)	39.2%	41.7%	62.1%
23. Unit Forced Outage Rate	53.7%	23.3%	9.3%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): Refueling Outage - 02/90 - 90 Days
25. If Shutdown At End of Report Period, Estimated Date of Startup: November 13, 1989

	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 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

MONTH: OCTOBER 1989

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	1251	17	0
2	1251	18	0
3	1249	19	0
4	1245	20	0
5	1248	21	0
6	1250	22	0
7	1252	23	0
8	1253	24	0
9	1254	25	0
10	1255	26	0
11	1254	27	0
12	1248	28	0
13	1210	29	0
14	0	30	0
15	0	31	193
16	0		

REFUELING INFORMATION

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

1. Scheduled date for next refueling shutdown.

   02/10/90, 2nd refueling.

2. Scheduled date for restart following refueling.

   05/16/90

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

   Fig. 3.1-1A, Tables 3.1-2, 3.1-3, 3.1-5, Fig. 3.2-2, Fig. 3.2-2a
   Fig. 3.1-3, Fig. 3.1-4, Tech Spec 3.2.7

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

   Issued 11/06/89

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.

   To be determined.

6. The number of fuel assemblies

   a) In the core. 241

   b) In the spent fuel storage pool. 108

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 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

OCTOBER 1989

10/01	0000	Unit began month operating in Mode 1, 100% RX Power.
10/13	20:35	Unit commenced shut down for replacement of two potentially unqualified Class IE switches.
10/14	02:26	Turbine taken off-line.
10/14	02:32	Unit entered Mode 2.
10/14	04:00	Unit entered Mode 3.
10/30	06:40	Unit entered Mode 2.
10/30	13:34	Unit entered Mode 1.
10/30	22:12	Generator synchronized to grid.
10/31	16:46	RX/Turbine trip on low DNBR.
10/31	24:00	Unit ended month in Mode 3.

SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

No.	Date	Type[1]	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
89/09	10/14/89	S	24.4	B	1	N/Av	N/Av	N/Av	Unit taken out of service to replace two potentionally unqualified Class IE swithces.
89/10	10/15/89	F	379.4	A	9	N/Av	N/Av	N/Av	A grounded Control Element Assembly drive assembly motor was found while in Mode 3.
89/11	10/31/89	F	7.2	A	3	N/Av	N/Av	N/Av	RX/Turbine trip on low DNBR.

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 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 3
2. Reporting Period: October 1989
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 (Items Number 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

	This Month	Yr.-to-Date	Cumulative
11. Hours in Reporting Period	744.0	7,296	15,912
12. Number of Hours Reactor Was Critical	0	1,106.1	9,307.8
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	0	1,095.0	9,273.0
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	0	4,090,086	34,402,824
17. Gross Electrical Energy Generated (MWH)	0	1,420,500	12,067,700
18. Net Electrical Energy Generated (MWH)	0	1,327,990	11,363,465
19. Unit Service Factor	0%	15.0%	58.3%
20. Unit Availability Factor	0%	15.0%	58.3%
21. Unit Capacity Factor (Using MDC Net)	0%	14.9%	58.5%
22. Unit Capacity Factor (Using DER Net)	0%	14.3%	56.2%
23. Unit Forced Outage Rate	0%	31.1%	9.1%

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 Startup: November 26, 1989

	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 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

MONTH: OCTOBER 1989

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	0
9	0	25	0
10	0	26	0
11	0	27	0
12	0	28	0
13	0	29	0
14	0	30	0
15	0	31	0
16	0		

REFUELING INFORMATION

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

1. Scheduled date for next refueling shutdown.

   03/07/91, 2nd refueling.

2. Scheduled date for restart following refueling.

   06/10/91

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

   To be determined.

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

   To be 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.

   The fuel vendor for the next reload will be Combustion Engineering.

6. The number of fuel assemblies

   a) In the core. 241

   b) In the spent fuel storage pool. 104

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 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

OCTOBER 1989

10/01	0000	Unit began month in Mode 5, 1st Refueling Outage.
10/31	2400	Unit ended month in Mode 5.

SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 11/13/89
COMPLETED BY K. F. Porter
TELEPHONE (602) 371-4187

No.	Date	Type[1]	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
89/03	03/08/89	S	744	C	4	N/A	N/A	N/A	Continuation of unit refueling outage.

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