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AUTH.NAME AUTHOR AFFILIATION
BORST,S.G. Arizona Nuclear Power Project (formerly Arizona Public Serv
HAYNES,J.G. Arizona Nuclear Power Project (formerly Arizona Public Serv
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SUBJECT: Monthly operating repts for Jan 1989 for Palo Verde Units 1, 2 & 3.W/890215 ltr.

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TITLE: Monthly Operating Report (per Tech Specs)

NOTES:Standardized plant. 05000528
Standardized plant. 05000529
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RIDS/ADDS

NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 1
2. Reporting Period: January 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	744.0	26,400.0
12. Number of Hours Reactor Was Critical	744.0	744.0	16,484.1
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator On-Line	744.0	744.0	16,048.9
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	2,775,471.0	2,775,471.0	56,141,394.0
17. Gross Electrical Energy Generated (MWH)	974,016.0	974,016.0	20,203,416.0
18. Net Electrical Energy Generated (MWH)	924,288.3	924,288.3	18,920,903.0
19. Unit Service Factor	100.0%	100.0%	60.8%
20. Unit Availability Factor	100.0%	100.0%	60.8%
21. Unit Capacity Factor (Using MDC Net)	101.7%	101.7%	58.7%
22. Unit Capacity Factor (Using DER Net)	97.8%	97.8%	56.4%
23. Unit Forced Outage Rate	0.0%	0.0%	26.5%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): Refueling Outage - 04/08/89 - 75 Days

25. If Shutdown At End of Report Period, Estimated Date of Startup: 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

IE24 1/1

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

MONTH: JANUARY 1989

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	1,266	17	1,261
2	1,265	18	1,261
3	1,260	19	1,259
4	1,257	20	1,257
5	1,259	21	1,247
6	1,262	22	1,259
7	1,265	23	1,259
8	1,264	24	1,256
9	1,263	25	1,258
10	1,263	26	1,259
11	1,262	27	1,259
12	1,262	28	1,259
13	1,246	29	1,261
14	1,012	30	1,259
15	1,030	31	1,259
16	1,210		

REFUELING INFORMATION

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

1. Scheduled date for next refueling shutdown.

   04/08/89

2. Scheduled date for restart following refueling.

   06/21/89

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

   Yes, as a minimum it will include the following: 3/4 1.3.6, 3/4 2.3, 3/4 2.4.

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

   Submitted on 01/12/89.

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.

   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. 80

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 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

JANUARY 1989

01/01	0000	Reactor power is at 100%.
01/13	2110	Reactor power reduced to 80% for surveillance testing.
01/16	1537	Reactor power is at 100%.
01/31	2400	Reactor power is at 100%.

SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

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

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. 50-529
UNIT NAME PVNGS-2
DATE 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 2
2. Reporting Period: January 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	744.0	20,784.0
12. Number of Hours Reactor Was Critical	744.0	744.0	15,769.1
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator On-Line	744.0	744.0	15,484.7
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	2,800,843.0	2,800,843.0	56,727,620.0
17. Gross Electrical Energy Generated (MWH)	976,320.0	976,320.0	19,844,790.0
18. Net Electrical Energy Generated (MWH)	919,101.1	919,101.1	18,603,154.0
19. Unit Service Factor	100.0%	100.0%	74.5
20. Unit Availability Factor	100.0%	100.0%	74.5%
21. Unit Capacity Factor (Using MDC Net)	101.2%	101.2%	73.3%
22. Unit Capacity Factor (Using DER Net)	97.3%	97.3%	70.5%
23. Unit Forced Outage Rate	0%	0%	5.2%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): None
25. If Shutdown At End of Report Period, Estimated Date of Startup: 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 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

MONTH: JANUARY 1989

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	1,245	17	1,215
2	1,245	18	1,246
3	1,243	19	1,244
4	1,239	20	1,241
5	1,234	21	1,242
6	1,229	22	1,246
7	1,101	23	1,247
8	1,248	24	1,244
9	1,246	25	1,246
10	1,244	26	1,245
11	1,244	27	1,243
12	1,247	28	1,246
13	1,246	29	1,245
14	1,246	30	1,245
15	1,246	31	1,244
16	1,230		

REFUELING INFORMATION

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

1. Scheduled date for next refueling shutdown.

   09/15/89

2. Scheduled date for restart following refueling.

   11/12/89

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.

   07/89

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 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

JANUARY 1989

01/01	0000	Unit in Mode 1 - Reactor Power 100%.
01/07	0100	Reactor power reduced to 75% to support surveillance testing.
01/07	1600	Reactor power is at 100%.
01/16	2233	Commenced boration due to D.C. electrical system investigation.
01/17	0400	Reactor power at 100%.
01/31	2400	Reactor power at 100%.

SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

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

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 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 3
2. Reporting Period: January 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	744.0	9,360.0
12. Number of Hours Reactor Was Critical	385.1	385.1	8,586.8
13. Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14. Hours Generator On-Line	374.0	374.0	8,552.0
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH)	1,393,430.0	1,393,430.0	31,706,168.0
17. Gross Electrical Energy Generated (MWH)	469,080.0	469,080.0	11,116,280.0
18. Net Electrical Energy Generated (MWH)	434,189.0	434,189.0	10,469,664.0
19. Unit Service Factor	50.3%	50.3%	91.4%
20. Unit Availability Factor	50.3%	50.3%	91.4%
21. Unit Capacity Factor (Using MDC Net)	47.8%	47.8%	91.6%
22. Unit Capacity Factor (Using DER Net)	46.0%	46.0%	88.1%
23. Unit Forced Outage Rate	49.7%	49.7%	8.7%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): Refueling Outage - 03/04/89 - 75 Days
25. If Shutdown At End of Report Period, Estimated Date of Startup: 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 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

MONTH: JANUARY 1989

DAY	AVERAGE DAILY POWER LEVEL	DAY	AVERAGE DAILY POWER LEVEL
1	1,260	17	0
2	1,258	18	0
3	1,255	19	0
4	1,252	20	0
5	1,252	21	21
6	183	22	747
7	0	23	1,189
8	0	24	1,264
9	0	25	1,261
10	0	26	1,196
11	0	27	1,200
12	0	28	1,264
13	0	29	1,266
14	0	30	1,262
15	0	31	1,264
16	0		

REFUELING INFORMATION

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

1. Scheduled date for next refueling shutdown.

   03/04/89

2. Scheduled date for restart following refueling.

   05/17/89

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

   Yes, these are expected to include the following: 2.1.1.1, 3/4 1.1.2, 3/4 1.1.3, 3/4 1.3.1, 3/4 1.3.6, 3/4 2.1, 3/4 2.3, 3/4 2.4, 3/4 2.5, 3/4 2.8, 3/4 3.1, 3/4 3.2.

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

   Submitted on 12/14/88

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. 0

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 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

JANUARY 1989

01/01	0000	Reactor power is at 100%.
01/06	0540	Main turbine tripped due to Diesel Generator problems.
01/06	0638	Reactor tripped.
01/21	0530	Reactor critical.
01/21	1045	Entered Mode 1
01/21	1538	Turbine synchronized to grid.
01/23	1427	Reactor at 100% power.
01/26	1207	Reactor power reduced for azimuthal tilt control.
01/27	1457	Reactor power at approximately 100%.
01/31	2400	Reactor power at 100%.

SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 02/13/89
COMPLETED BY S. G. Borst
TELEPHONE (602) 371-4092

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
89.01	01/06	F	379	A	1	89-004	EK	DG	

During routine testing of the "A" EDG on January 4, 1989, the exhaust rocker arm for the 8L cylinder failed resulting in an EDG trip. The remaining rocker arms on the "A" EDG were inspected and another crack was identified on the exhaust rocker arm for the 9R cylinder.

The rocker arms for the remaining Palo Verde Units 1, 2, and 3 EDG's have been inspected and no other deficiencies were noted. Long-term corrective action will be developed in association with the original equipment manufacturer (Cooper-Bessemer).

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

Arizona Nuclear Power Project
P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

254-00093-JGH/SGB
February 15, 1989

Docket Nos. STN 50-528/529/530

Document Control Desk
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 January 1989
File: 88-024-404/88-056-026

Attached are the Monthly Operating Reports for January 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. S. G. Borst, at (602) 371-4092.

Very truly yours,

J. G. Haynes
Vice President
Nuclear Production

JGH/SGB/dlm
Attachments

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

IE24
1/1