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 STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publi 05000529
 STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530
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 HULL, J.L. Arizona Nuclear Power Project (formerly Arizona Public Serv
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 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: Monthly operating repts for Feb 1988. W/880315 ltr.

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NRC MONTHLY OPERATING REPORT

DOCKET NO.	50-528
UNIT NAME	PVNGS-1
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 1
2. Reporting Period: February 1988
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: _____
9. Power Level to Which Restricted, If Any (Net MWe): NONE
10. Reasons For Restrictions, If Any: _____

	This Month	Yr.-to-Date	Cumulative
11. Hours in Reporting Period	<u>696</u>	<u>1440</u>	<u>18312</u>
12. Number of Hours Reactor Was Critical	<u>0.0</u>	<u>0.0</u>	<u>9,977.2</u>
13. Reactor Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
14. Hours Generator On-Line	<u>0.0</u>	<u>0.0</u>	<u>9,717.1</u>
15. Unit Reserve Shutdown Hours	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>
16. Gross Thermal Energy Generated (MWH)	<u>0.0</u>	<u>0.0</u>	<u>35,032,837</u>
17. Gross Electrical Energy Generated (MWH)	<u>0.0</u>	<u>0.0</u>	<u>12,143,300</u>
18. Net Electrical Energy Generated (MWH)	<u>0.0</u>	<u>0.0</u>	<u>11,327,925</u>
19. Unit Service Factor	<u>0.0%</u>	<u>0.0%</u>	<u>53.1%</u>
20. Unit Availability Factor	<u>0.0%</u>	<u>0.0%</u>	<u>53.1%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>0.0%</u>	<u>0.0%</u>	<u>50.7%</u>
22. Unit Capacity Factor (Using DER Net)	<u>0.0%</u>	<u>0.0%</u>	<u>48.7%</u>
23. Unit Forced Outage Rate	<u>100.0%</u>	<u>100.0%</u>	<u>30.6%</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>Currently in refueling shutdown</u>			
25. If Shutdown At End of Report Period, Estimated Date of Startup: <u>03/05/88</u>			
26. Units in Test Status (Prior To Commercial Operation):			

INITIAL CRITICALITY
INITIAL ELECTRICITY
COMMERCIAL OPERATION

Forecast	Achieved
<u>5/85</u>	<u>5/25/85</u>
<u>6/85</u>	<u>6/10/85</u>
<u>11/85</u>	<u>1/28/86</u>

IE2411

8803160184 880229
PDR ADDCK 05000528
DCD

REFUELING INFORMATION

DOCKET NO.	50-528
UNIT :	PVNGS-1
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

1. Scheduled date for next refueling shutdown.

02/24/89

2. Scheduled date for restart following refueling.

05/04/89

3. Will refueling or resumption or 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.

To be determined

REFUELING INFORMATION

DOCKET NO.	50-528
UNIT	PVNGS-1
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

(Continued)

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.

2006 (18 Months reloads and full core discharge capability).

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO.	50-528
UNIT NAME	PVNGS-1
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

MONTH: February 1988

DAY AVERAGE DAILY POWER LEVEL

1	0
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	
31	

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO.	50-528
UNIT	PVNGS-1
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

February 1988

02/01	0000	Unit in Mode 5.
02/02	1122	Entered Mode 6 to investigate mechanical binding of CEA #56
02/20	1530	Entered Mode 5
02/29	1635	Entered Mode 4
02/29	2400	Unit in Mode 4

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO: 50-528
 UNIT NAME: PVNGS-1
 DATE: 03/07/88
 COMPLETED BY: J.L. Hull
 TELEPHONE: 602-393-2679

No.	Date	Type ¹	Duration Hours	Reason ²	Method of Shutting Down Reactor ³	LER NO.	System ⁴ Code	Component ⁵ Code	Cause and Corrective Action to Prevent Recurrence
10	Cont'd	F	696	A	-	-	-	-	Unit Shutdown to repair an inoperable Control Element Assembly.

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 (Explain)
 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
 6-Other (Explain)

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

⁵ Exhibit II-Same Source

NRC MONTHLY OPERATING REPORT

DOCKET NO.	50-529
UNIT NAME	PVNGS-2
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 2
2. Reporting Period: February 1988
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: _____
9. Power Level to Which Restricted, If Any (Net MWe): NONE
10. Reasons For Restrictions, If Any: _____

	This Month	Yr.-to-Date	Cumulative
11. Hours in Reporting Period	<u>696</u>	<u>1440</u>	<u>12,696</u>
12. Number of Hours Reactor Was Critical	<u>458</u>	<u>1202</u>	<u>10,477.1</u>
13. Reactor Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
14. Hours Generator On-Line	<u>458</u>	<u>1202</u>	<u>10,328.2</u>
15. Unit Reserve Shutdown Hours	<u>0</u>	<u>0</u>	<u>0</u>
16. Gross Thermal Energy Generated (MWH)	<u>1,711,979.</u>	<u>4,508,600.</u>	<u>37,715,767</u>
17. Gross Electrical Energy Generated (MWH)	<u>603,800.</u>	<u>1,588,100.</u>	<u>13,249,370</u>
18. Net Electrical Energy Generated (MWH)	<u>560,018.</u>	<u>1,487,775.</u>	<u>12,424,657</u>
19. Unit Service Factor	<u>65.8%</u>	<u>83.5%</u>	<u>81.4%</u>
20. Unit Availability Factor	<u>65.8%</u>	<u>83.5%</u>	<u>81.4%</u>
21. Unit Capacity Factor (Using MDC Net)	<u>65.9%</u>	<u>84.6%</u>	<u>80.1%</u>
22. Unit Capacity Factor (Using DER Net)	<u>63.4%</u>	<u>81.4%</u>	<u>77.1%</u>
23. Unit Forced Outage Rate	<u>0.0%</u>	<u>0.0%</u>	<u>5.9%</u>
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):	<u>Currently in Refueling Outage</u>		
25. If Shutdown At End of Report Period, Estimated Date of Startup:	<u>05/15/88</u>		
26. Units in Test Status (Prior To Commercial Operation):			

INITIAL CRITICALITY
INITIAL ELECTRICITY
COMMERCIAL OPERATION

Forecast	Achieved
<u>3/86</u>	<u>4/18/86</u>
<u>6/86</u>	<u>5/20/86</u>
<u>11/86</u>	<u>9/17/86</u>

REFUELING INFORMATION

DOCKET NO.	50-529
UNIT	PVNGS-2
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

1. Scheduled date for next refueling shutdown.
09/23/89
2. Scheduled date for restart following refueling.
12/01/89
3. Will refueling or resumption or 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.
To be determined

REFUELING INFORMATION

DOCKET NO.	50-529
UNIT	PVNGS-2
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

(Continued)

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.
2006 (18 Months reloads and full core discharge capability).

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO.	50-529
UNIT	PVNGS-2
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

MONTH: February 1988

DAY AVERAGE DAILY POWER LEVEL

1	1.260
2	1.256
3	1.256
4	1.260
5	1.256
6	1.260
7	1.260
8	1.256
9	1.260
10	1.252
11	1.252
12	1.243
13	1.239
14	1.239
15	1.239
16	1.227

DAY AVERAGE DAILY POWER LEVEL

17	1.239
18	1.214
19	1.138
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	0
29	0
30	
31	

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO.	50-529
UNIT	PVNGS-2
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

February 1988

02/01	0000	Unit in Mode 1 - Reactor Power 100%.
02/12		Unit 2 commenced a power coastdown due to the pending refueling.
02/19	2255	Reactor power at 71%.
02/19	2330	Reactor power at 62%.
02/20	0202	Main Turbine tripped/Reactor tripped, Unit in Mode 3
02/20	1554	Entered Mode 4
02/21	0516	Entered Mode 5
02/29	2400	Unit in Mode 5

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO: 50-529
 UNIT NAME: PVNGS-2
 DATE: 03/07/88
 COMPLETED BY: J.L. Hull
 TELEPHONE: 602-393-2679

No.	Date	Type ¹	Duration Hours	Reason ²	Method of Shutting Down Reactor ³	LER NO.	System ⁴ Code	Component ⁵ Code	Cause and Corrective Action to Prevent Recurrence
2	02/20	S	238	C	P.	N/A	N/A	N/A	Unit shutdown due to 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 (Explain)
 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 Data
 Entry Sheets for Licensee
 Event Report (LER) File
 (NUREG 0161)

⁵ Exhibit II-Same Source

NRC MONTHLY OPERATING REPORT

DOCKET NO.	50-530
UNIT NAME	PVNGS-3
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 3
2. Reporting Period: February 1988
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: _____
9. Power Level to Which Restricted, If Any (Net MWe): NONE
10. Reasons For Restrictions, If Any: _____

	This Month	Yr.-to-Date	Cumulative
11. Hours in Reporting Period	696	1272	1272
12. Number of Hours Reactor Was Critical	696	1272	1272
13. Reactor Reserve Shutdown Hours	0	0	0
14. Hours Generator On-Line	696.0	1272	1272
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,603,103.	4,776,216.0	4,776,216.
17. Gross Electrical Energy Generated (MWH)	921,700.	1,686,600.	1,686,600.
18. Net Electrical Energy Generated (MWH)	872,225.	1,596,758.	1,596,758.
19. Unit Service Factor	100.0%	100.0%	100.0%
20. Unit Availability Factor	100.0%	100.0%	100.0%
21. Unit Capacity Factor (Using MDC Net)	102.6%	102.8%	102.8%
22. Unit Capacity Factor (Using DER Net)	98.7%	98.8%	98.8%
23. Unit Forced Outage Rate	0	0	0
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):	<u>None</u>		
25. If Shutdown At End of Report Period, Estimated Date of Startup:	<u>N/A</u>		
26. Units in Test Status (Prior To Commercial Operation):			

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

REFUELING INFORMATION

DOCKET NO.	50-530
UNIT	PVNGS-3
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

1. Scheduled date for next refueling shutdown.
02/25/89
2. Scheduled date for restart following refueling.
05/05/89
3. Will refueling or resumption or operation thereafter require a Technical Specification change or other license amendment?

Not Yet Determined

What will these be?

Not Yet Determined
4. Scheduled date for submitting proposed licensing action and supporting information.

Not Yet 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.

Not Yet Determined
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.

2007 (18 Months reloads and full core discharge capability).

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-530
UNIT PVNGS-3
DATE 03/07/88
COMPLETED BY J.L. Hull
TELEPHONE 602-393-2679

MONTH: February 1988

DAY AVERAGE DAILY POWER LEVEL

1 1,264
2 1,264
3 1,264
4 1,260
5 1,268
6 1,201
7 1,268
8 1,276
9 1,072
10 1,089
11 1,268
12 1,276
13 1,272
14 1,264
15 1,272

DAY AVERAGE DAILY POWER LEVEL

15 1,272
16 1,272
17 1,272
18 1,276
19 1,272
20 1,272
21 1,272
22 1,268
23 1,272
24 1,264
25 1,264
26 1,264
27 1,264
28 1,268
29 1,264

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO.	50-530
UNIT	PVNGS-3
DATE	03/07/88
COMPLETED BY	J.L. Hull
TELEPHONE	602-393-2679

February 1988

02/01	0000	Unit in Mode 1 - Reactor Power 100%.
02/09	1045	Power reduction to 70% to fix leak on Main Feed Water Pump "A".
02/09	1358	Reactor power at 70%.
02/10	0730	Started power increase.
02/10	1128	Reactor power at 100%.
02/29	2400	Unit in Mode 1 - Reactor Power 100%.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO: 50-530
 UNIT NAME: PVNGS-3
 DATE: 03/07/88
 COMPLETED BY: J.L. Hull
 TELEPHONE: 602-393-2679

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
1	02/09	F	N/A	A	5	N/A	SJ	P	Power reduction to 70% in order to repair Main Feed Water Pump leak.

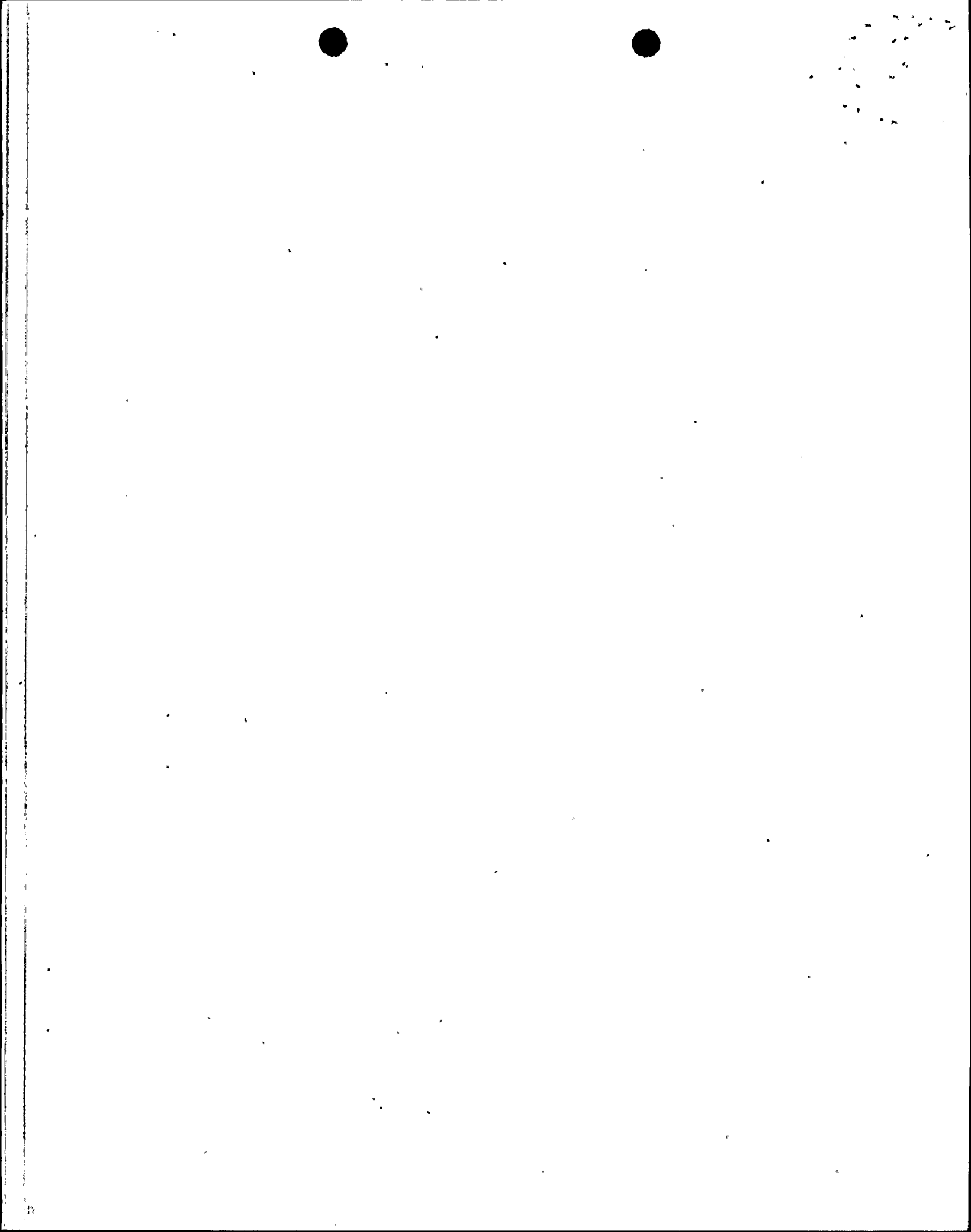
¹ F-Forced
 S-Scheduled

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 (Explain)
 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 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

212-00136-JGH/TJB

March 15, 1988

Docket Nos. STN 50-528/529/530

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

Gentlemen:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Units 1, 2 and 3
February Monthly Operating Report
File: 88-024-404/88-056-026

Attached are the February Monthly Operating Reports 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 a copy of the Monthly Operating Reports to the Regional Administrator of the Region V Office.

If you have any questions, please contact Mr. T. J. Bloom, at (602) 371-4187.

Very truly yours,

J. G. Haynes
Vice President
Nuclear Production

JGH/TJB/ksr
Attachments

cc: O. M. DeMichele (all w/a)
E. E. Van Brunt, Jr.
J. B. Martin
E. A. Licitra
A. C. Gehr
J. A. Amenta
INPO Records Center

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