

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8801200133 DOC. DATE: 8/12/31 NOTARIZED: NO DOCKET #  
 FACIL: STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Publi 05000528  
 STN-50-529 Palo Verde Nuclear Station, Unit 2, Arizona Publi 05000529  
 STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530  
 AUTH. NAME AUTHOR AFFILIATION  
 HULL, J.L. Arizona Nuclear Power Project (formerly Arizona Public Serv  
 HAYNES, J.G. Arizona Nuclear Power Project (formerly Arizona Public Serv  
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: Monthly operating repts for Dec 1987. W/880113 ltr.

DISTRIBUTION CODE: IE24D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 19  
 TITLE: Monthly Operating Report (per Tech Specs)

NOTES: Standardized plant.  
 Standardized plant.  
 Standardized plant.

05000528  
 05000529  
 05000530

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| NRR/DREP/RPB              | 1 1                 | NRR/PMAS/ILRB             | 1 1                 |
| REG FILE 01               | 1 1                 | RGN5                      | 1 1                 |
| EXTERNAL: EG&G GROH, M    | 1 1                 | LPDR                      | 1 1                 |
| NRC PDR                   | 1 1                 | NSIC                      | 1 1                 |
| NOTES:                    | 1 1                 |                           |                     |

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# NRC MONTHLY OPERATING REPORT

|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-528       |
| UNIT NAME    | PVNGS-1      |
| DATE         | 01/08/88     |
| COMPLETED BY | J.L. Hull    |
| TELEPHONE    | 602-393-2679 |

## OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 1
  2. Reporting Period: December 1987
  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   | 744        | 8760        | 16872        |
| 12. Number of Hours Reactor Was Critical  | 0.0        | 4,589.1     | 9,977.2      |
| 13. Reactor Reserve Shutdown Hours  | 0.0        | 0.0         | 0.0          |
| 14. Hours Generator On-Line   | 0.0        | 4,505.5     | 9,717.1      |
| 15. Unit Reserve Shutdown Hours   | 0.0        | 0.0         | 0.0          |
| 16. Gross Thermal Energy Generated (MWH)  | 0.0        | 16,140,694. | 35,032,837   |
| 17. Gross Electrical Energy Generated (MWH)   | 0.0        | 5,616,400.  | 12,143,300   |
| 18. Net Electrical Energy Generated (MWH)   | 0.0        | 5,268,268.6 | 11,327,924.6 |
| 19. Unit Service Factor   | 0.0%       | 51.4%       | 57.6%        |
| 20. Unit Availability Factor  | 0.0%       | 51.4%       | 57.6%        |
| 21. Unit Capacity Factor (Using MDC Net)  | 0.0%       | 49.3%       | 55.0%        |
| 22. Unit Capacity Factor (Using DER Net)  | 0.0%       | 47.4%       | 52.9%        |
| 23. Unit Forced Outage Rate   | 0.0%       | 31.7%       | 24.4%        |
| 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>Estimated Mode 2 entry, 01/14/87</u>           |            |             |              |
| 26. Units in Test Status (Prior To Commercial Operation):   |            |             |              |

INITIAL CRITICALITY  
INITIAL ELECTRICITY  
COMMERCIAL OPERATION

|          |          |
|----------|----------|
| Forecast | Achieved |
| 5/85     | 5/25/85  |
| 6/85     | 6/10/85  |
| 11/85    | 1/28/86  |

8801200133 871231  
PDR ADOCK 05000528  
R DCD

1924  
11



# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-528  
UNIT NAME PVNGS-1  
DATE 01/08/88  
COMPLETED BY J.L. Hull  
TELEPHONE 602-393-2679

MONTH: December 1987

## 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 | 0 |
| 31 | 0 |



# REFUELING INFORMATION

|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-528       |
| UNIT         | PVNGS-1      |
| DATE         | 01/08/88     |
| COMPLETED BY | J.L. Hull    |
| TELEPHONE    | 602-393-2679 |

1. Scheduled date for next refueling shutdown.

10/02/87

2. Scheduled date for restart following refueling.

01/14/88

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

Yes

Required Technical Specifications are as follows:

5.3.1, 3/4.1.1.2, 3/4.1.1.3, 3/4.2.8, 3/4.1.3.1, 3/4.3.1, 3/4.1.3.6, 3/4.3.1, 2.1.1, 3/4.2.5, 3/4.2.1, 3/4.2.4, 3/4.2.7, 3/4.3.2

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

July 1, 1987

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.

a) Modification of the CPCs under the CPC Improvement Program (CIP) and the Statistical Combination of Uncertainties (SCU) Program.

b) Maximum peak pin fuel enrichment will be 4.05 w % U235.

c) The fuel vendor for the following next 5 reloads will be Combustion Engineering.





# REFUELING INFORMATION

|              |                     |
|--------------|---------------------|
| DOCKET NO.   | <u>50-528</u>       |
| UNIT         | <u>PVNGS-1</u>      |
| DATE         | <u>01/08/88</u>     |
| COMPLETED BY | <u>J.L. Hull</u>    |
| TELEPHONE    | <u>602-393-2679</u> |

(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).



SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-528       |
| UNIT         | PVNGS-1      |
| DATE         | 01/08/88     |
| COMPLETED BY | J.L. Hull    |
| TELEPHONE    | 602-393-2679 |

December 1987

|       |      |                                    |
|-------|------|------------------------------------|
| 12/01 |      | Unit in Refueling Outage - Mode 6. |
| 12/02 | 0500 | Entered Mode 5                     |
| 12/31 |      | Unit in Refueling Outage - Mode 5. |



## UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO: 50-528

UNIT NAME: PVNGS-1

DATE: 01/08/88

COMPLETED BY: J.L. Hull

TELEPHONE: 393-2679

| No. | Date      | Type <sup>1</sup> | Duration<br>Hours | Reason <sup>2</sup> | Method of<br>Shutting<br>Down Reactor <sup>3</sup> | LER NO. | System <sup>4</sup><br>Code | Component <sup>5</sup><br>Code | Cause and Corrective<br>Action to<br>Prevent Recurrence |
|-----|-----------|-------------------|-------------------|---------------------|--|---------|-----------------------------|--------------------------------|---|
| 10  | Continued | S                 | 744               | C                   | 1  | N/A     | N/A                         | N/A                            | Unit shut down due to<br>Refueling Outage.              |

<sup>1</sup> F-Forced  
S-Scheduled

<sup>2</sup> 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)

<sup>3</sup> 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)

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

<sup>5</sup> Exhibit H-Same Source



# NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-529  
UNIT NAME PVNGS-2  
DATE 01/08/88  
COMPLETED BY J.L. Hull  
TELEPHONE 602-393-2679

## OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 2
2. Reporting Period: December 1987
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>744</u>        | <u>8760</u>        | <u>11256</u>      |
| 12. Number of Hours Reactor Was Critical   | <u>744</u>        | <u>6,985.2</u>     | <u>9,275.1</u>    |
| 13. Reactor Reserve Shutdown Hours   | <u>0</u>          | <u>0</u>           | <u>0</u>          |
| 14. Hours Generator On-Line  | <u>744</u>        | <u>6,859.2</u>     | <u>9,126.2</u>    |
| 15. Unit Reserve Shutdown Hours  | <u>0</u>          | <u>0</u>           | <u>0</u>          |
| 16. Gross Thermal Energy Generated (MWH)   | <u>2,799,320.</u> | <u>24,912,161.</u> | <u>33,207,167</u> |
| 17. Gross Electrical Energy Generated (MWH)  | <u>987,000.</u>   | <u>8,733,100.</u>  | <u>11,661,270</u> |
| 18. Net Electrical Energy Generated (MWH)  | <u>933,198.</u>   | <u>8,190,044.</u>  | <u>10,936,882</u> |
| 19. Unit Service Factor  | <u>100.0%</u>     | <u>78.3%</u>       | <u>81.1%</u>      |
| 20. Unit Availability Factor   | <u>100.0%</u>     | <u>78.3%</u>       | <u>81.1%</u>      |
| 21. Unit Capacity Factor (Using MDC Net)   | <u>102.7%</u>     | <u>76.6%</u>       | <u>79.6%</u>      |
| 22. Unit Capacity Factor (Using DER Net)   | <u>98.8%</u>      | <u>73.6%</u>       | <u>76.5%</u>      |
| 23. Unit Forced Outage Rate  | <u>0.0%</u>       | <u>5.8%</u>        | <u>6.6%</u>       |
| 24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): <u>Scheduled Date for next Refueling Shutdown -2/21/88</u><br><u>Duration of refueling shutdown approximately 84 days</u> |                   |                    |                   |
| 25. If Shutdown At End of Report Period, Estimated Date of Startup:  |                   |                    |                   |
| 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>9/19/86</u> |





# AVERAGE DAILY UNIT POWER LEVEL

|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-529       |
| UNIT         | PVNGS-2      |
| DATE         | 01/08/88     |
| COMPLETED BY | J.L. Hull    |
| TELEPHONE    | 602-393-2679 |

MONTH: December 1987

## DAY AVERAGE DAILY POWER LEVEL

|    |       |
|----|-------|
| 1  | 1,272 |
| 2  | 1,267 |
| 3  | 1,267 |
| 4  | 1,267 |
| 5  | 1,263 |
| 6  | 1,263 |
| 7  | 1,267 |
| 8  | 1,267 |
| 9  | 1,263 |
| 10 | 1,272 |
| 11 | 1,259 |
| 12 | 1,272 |
| 13 | 1,272 |
| 14 | 1,267 |
| 15 | 1,272 |
| 16 | 1,267 |

## DAY AVERAGE DAILY POWER LEVEL

|    |       |
|----|-------|
| 17 | 1,267 |
| 18 | 1,259 |
| 19 | 1,267 |
| 20 | 1,263 |
| 21 | 1,267 |
| 22 | 1,272 |
| 23 | 1,267 |
| 24 | 1,263 |
| 25 | 1,188 |
| 26 | 988   |
| 27 | 1,247 |
| 28 | 1,263 |
| 29 | 1,263 |
| 30 | 1,267 |
| 31 | 1,263 |



REFUELING INFORMATION

|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-529       |
| UNIT         | PVNGS-2      |
| DATE         | 01/08/88     |
| COMPLETED BY | J.L. Hull    |
| TELEPHONE    | 602-393-2679 |

1. Scheduled date for next refueling shutdown.

02/21/88

2. Scheduled date for restart following refueling.

05/15/88

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

YES

What will these be?

3/4 1.1.2 , 3/4 1.1.3 , 3/4 2.8 , 3/4 1.3.1 , 3/4 3.1 ,  
3/4 1.3.6, 3/4 2.5 , 3/4 2.1 , 3/4 2.4 , 3/4 2.3 , 3/4 3.2  
2.1.1.1

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

12/15/87

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.

a) Modification of the CPCs under the CPC Improvement Program (CIP) and the Statistical Combination of Uncertainties (SCU) Program.

b) Maximum peak pin fuel enrichment will be 4.05 w % U235.

c) The fuel vendor for the following next 5 reloads will be Combustion Engineering.



REFUELING INFORMATION

|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-529       |
| UNIT         | PVNGS-2      |
| DATE         | 01/08/88     |
| 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).



SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-529       |
| UNIT         | PVNGS-2      |
| DATE         | 01/08/88     |
| COMPLETED BY | J.L. Hull    |
| TELEPHONE    | 602-393-2679 |

December 1987

|       |      |  |
|-------|------|--|
| 12/01 |      | Reactor Power 100%.  |
| 12/25 | 0923 | Power reduction to 75% for monthly surveillance testing and secondary side maintenance on the moisture separator reheater. |
| 12/26 |      | Completed power reduction to 75%   |
| 12/27 | 0030 | Reactor Power at 90%   |
| 12/27 | 0515 | Reactor Power at 100%  |
| 12/31 | 2400 | Reactor Power at 100%  |





## UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO: 50-529  
 UNIT NAME: PVNGS-2  
 DATE: 01/08/88  
 COMPLETED BY: J.L. Hull  
 TELEPHONE: 393-2679

| No. | Date  | Type <sup>1</sup> | Duration<br>Hours | Reason <sup>2</sup> | Method of<br>Shutting<br>Down Reactor <sup>3</sup> | LER NO. | System <sup>4</sup><br>Code | Component <sup>5</sup><br>Code | Cause and Corrective<br>Action to<br>Prevent Recurrence   |
|-----|-------|-------------------|-------------------|---------------------|--|---------|-----------------------------|--------------------------------|---|
| 17  | 12/25 | S                 | N/A               | B                   | 55   | N/A     | N/A                         | N/A                            | Power reduction to 75% for<br>monthly surveillance test<br>and secondary maintenance<br>(MSR leak repair) |

<sup>1</sup> F-Forced  
S-Scheduled

<sup>2</sup> 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)

<sup>3</sup> 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)

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

<sup>5</sup> Exhibit H-Same Source



# NRC MONTHLY OPERATING REPORT

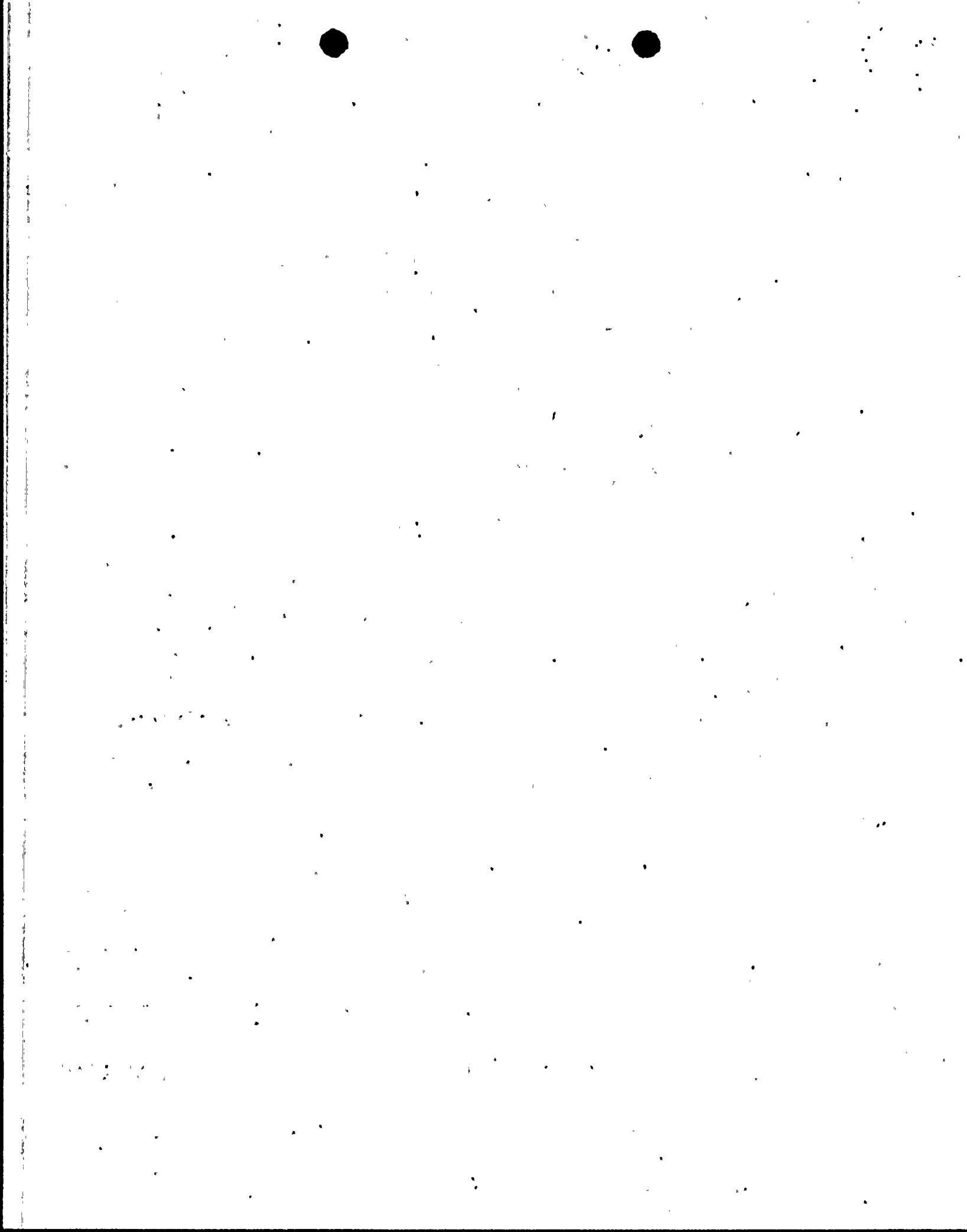
|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-530       |
| UNIT NAME    | PVNGS-3      |
| DATE         | 01/08/88     |
| COMPLETED BY | J.L. Hull    |
| TELEPHONE    | 602-393-2679 |

## OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 3
2. Reporting Period: December 1987
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  | 744        | 6048        | 6048       |
| 12. Number of Hours Reactor Was Critical   | 677.0      | 945.9       | 945.9      |
| 13. Reactor Reserve Shutdown Hours   | 0          | 0           | 0          |
| 14. Hours Generator On-Line  | 606.6      | 620.7       | 620.7      |
| 15. Unit Reserve Shutdown Hours  | 0          | 0           | 0          |
| 16. Gross Thermal Energy Generated (MWH)   | 1,192,385. | 1,244,187.0 | 1,244,187. |
| 17. Gross Electrical Energy Generated (MWH)  | 364,100.   | 365,300.    | 365,300.   |
| 18. Net Electrical Energy Generated (MWH)  | 319,661.   | 319,661.    | 319,661.   |
| 19. Unit Service Factor  | 0          | 0           | 0          |
| 20. Unit Availability Factor   | 0          | 0           | 0          |
| 21. Unit Capacity Factor (Using MDC Net)   | 0          | 0           | 0          |
| 22. Unit Capacity Factor (Using DER Net)   | 0          | 0           | 0          |
| 23. Unit Forced Outage Rate  | 0          | 0           | 0          |
| 24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): _____ |            |             |            |
| 25. If Shutdown At End of Report Period, Estimated Date of Startup: _____            |            |             |            |
| 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    | -----    |



# AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-530  
UNIT PVNGS-3  
DATE 01/08/88  
COMPLETED BY J.L. Hull  
TELEPHONE 602-393-2679

MONTH: December 1987

## DAY AVERAGE DAILY POWER LEVEL

|    |     |
|----|-----|
| 1  | 70  |
| 2  | 78  |
| 3  | 120 |
| 4  | 141 |
| 5  | 41  |
| 6  | 0   |
| 7  | 3   |
| 8  | 172 |
| 9  | 451 |
| 10 | 551 |
| 11 | 576 |
| 12 | 580 |
| 13 | 555 |
| 14 | 572 |
| 15 | 505 |
| 16 | 559 |

## DAY AVERAGE DAILY POWER LEVEL

|    |       |
|----|-------|
| 17 | 59    |
| 18 | 0     |
| 19 | 126   |
| 20 | 540   |
| 21 | 552   |
| 22 | 548   |
| 23 | 485   |
| 24 | 623   |
| 25 | 802   |
| 26 | 907   |
| 27 | 970   |
| 28 | 1,036 |
| 29 | 361   |
| 30 | 197   |
| 31 | 1,149 |



# REFUELING INFORMATION

|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-530       |
| UNIT         | PVNGS-3      |
| DATE         | 01/08/88     |
| 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).





# SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-530       |
| UNIT         | PVNGS-3      |
| DATE         | 01/08/88     |
| COMPLETED BY | J.L. Hull    |
| TELEPHONE    | 602-393-2679 |

## December 1987

|       |      |   |
|-------|------|---|
| 12/01 |      | Reactor at 12% Mode 1   |
| 12/02 | 1750 | Tripped turbine due to steam leak between control valve and the high pressure turbine - Reactor power at approximately 19.5%.   |
| 12/03 | 0026 | Synchronized Main Generator to grid   |
| 12/05 | 1140 | Reactor at approximately 19% the reactor was tripped for testing of remote shutdown panel. Mode 3   |
| 12/06 | 1302 | Reactor critical Mode 2   |
| 12/06 | 1508 | Entered Mode 1  |
| 12/06 | 1656 | Synchronized Main Generator to grid   |
| 12/07 | 0201 | Reactor power approximately 19% lowering power to 2% to allow for turbine work.   |
| 12/07 | 0315 | Tripped Main Turbine, Mode 3  |
| 12/07 | 0429 | Entered Mode 2, reactor critical  |
| 12/07 | 1112 | Entered Mode 1  |
| 12/07 | 1615 | Synchronized Main Generator to grid   |
| 12/07 | 2325 | Tripped Main Generator for Subsynchronous Resonance Testing, reactor at approximately 13%.  |
| 12/08 | 0215 | Synchronized Main Generator to grid   |
| 12/08 | 1330 | Reactor power 30%   |
| 12/09 | 0137 | Reactor power 50%   |
| 12/17 | 0430 | Reactor trip occurred as a result of Lo DNBR calculated by CPCs. During insertion of part length CEAs a subgroup deviation occurred between groups P1 and P2, causing the insertion of a subgroup deviation penalty factor. |



# SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

|              |              |
|--------------|--------------|
| DOCKET NO.   | 50-530       |
| UNIT         | PVNGS-3      |
| DATE         | 01/08/88     |
| COMPLETED BY | J.L. Hull    |
| TELEPHONE    | 602-393-2679 |

## December 1987

|       |      |  |
|-------|------|--|
| 12/18 | 2207 | Reactor Critical Mode 2  |
| 12/19 | 0412 | Entered Mode 1   |
| 12/19 | 0625 | Synchronized to grid   |
| 12/19 | 0838 | Turbine tripped due to high vibration  |
| 12/19 | 1535 | Synchronized Main Generator to grid  |
| 12/19 | 1535 | Turbine tripped on reverse power.  |
| 12/19 | 1610 | Synchronized Main Generator to grid  |
| 12/24 | 1439 | Reactor power 60%  |
| 12/26 | 1115 | Reactor power 80%  |
| 12/29 | 0827 | Turbine trip following a main generator trip on high stator cooling water temperature. Temperature switches were miscalibrated, initiating a generator trip when stator cooling water temperatures were in normal range. |
| 12/29 | 1000 | Entered Mode 2   |
| 12/30 | 0833 | Entered Mode 1   |
| 12/30 | 1240 | Synchronized Main Generator to grid  |
| 12/31 | 1821 | Reactor power 100%   |
| 12/31 | 2400 | Reactor power 100%   |



## UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO: 50-530  
 UNIT NAME: PVNGS-3  
 DATE: 1/8/88  
 COMPLETED BY: J.L. Hull  
 TELEPHONE: 602-393-2679

| No. | Date  | Type <sup>1</sup> | Duration<br>Hours | Reason <sup>2</sup> | Method of<br>Shutting<br>Down Reactor <sup>3</sup> | LER NO.  | System<br>Code <sup>4</sup> | Component<br>Code <sup>5</sup> | Cause and Corrective<br>Action to<br>Prevent Recurrence   |
|-----|-------|-------------------|-------------------|---------------------|--|----------|-----------------------------|--------------------------------|---|
| 4   | 12/02 | F                 | 6.6               | A                   | N/A  | N/A      | N/A                         | N/A                            | Tripped turbine due to steam leak between control valve and the High Pressure Turbine.  |
| 5   | 12/05 | S                 | 29.3              | B                   | 2  | N/A      | N/A                         | N/A                            | Reactor tripped for testing of Remote Shutdown Panel.   |
| 6   | 12/07 | F                 | 13.0              | B                   | N/A  | N/A      | N/A                         | N/A                            | Tripped Turbine due to maintenance work on Turbine.   |
| 7   | 12/07 | S                 | 2.8               | B                   | N/A  | N/A      | N/A                         | N/A                            | Tripped Turbine for subsynchronous resonance testing.   |
| 8   | 12/17 | F                 | 49.9              | A                   | 3  | 3-87-004 | AA                          | ZC                             | Reactor trip occurred as a result of Lo DNBR calculated by CPCs. During insertion of part length CEAs a subgroup deviation occurred between groups P1 and P2, causing the insertion of a subgroup deviation penalty factor. |
| 9   | 12/19 | F                 | 7.0               | A                   | N/A  | N/A      | N/A                         | N/A                            | Turbine trip due to high vibration.   |
| 10  | 12/19 | F                 | .6                | A                   | N/A  | N/A      | N/A                         | N/A                            | Turbine trip due to reverse power.  |
| 11  | 12/29 | F                 | 28.2              | A                   | N/A  | N/A      | N/A                         | N/A                            | Turbine trip due to SBCS Quick Open, recalibrated temperature switches.   |

<sup>1</sup> F-Forced  
S-Scheduled

<sup>2</sup> 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)

<sup>3</sup> 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)

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

<sup>5</sup> Exhibit II-Same Source





## Arizona Nuclear Power Project

P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

January 13, 1988  
212-00085-JGH/TJB

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  
December Monthly Operating Report  
File: 88-024-404; 88-056-026

Attached is the December 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/rw  
Attachments

cc: O. M. De Michele (all w/a)  
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INPO Records Center

