

ENCLOSURE 1

NRC MONTHLY OPERATING REPORT
FOR FEBRUARY 1992

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NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-528
 UNIT NAME PVNGS-1
 DATE 03/09/92
 COMPLETED BY K.A. Chavet
 TELEPHONE (602) 340-4718

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 1
2. Reporting Period: February 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	696	1,440	53,376
12.	Hours Reactor was Critical	338.3	831.0	29,890.1
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14.	Hours Generator was On-Line	338.3	810.3	29,132.4
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	1,248,802	2,679,785	106,544,041
17.	Gross Electrical Energy Generated (MWH)	434,200	924,200	36,972,900
18.	Net Electrical Energy Generated (MWH)	406,459	857,484	34,682,276
19.	Unit Service Factor (%)	48.6%	56.3%	54.6%
20.	Unit Availability Factor (%)	48.6%	56.3%	54.6%
21.	Unit Capacity Factor (Using MDC Net)	47.8%	48.8%	53.2%
22.	Unit Capacity Factor (Using DER Net)	46.0%	46.9%	51.2%
23.	Unit Forced Outage Rate (%)	0.0%	25.1%	20.4%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date and Duration of Each): Refueling outage began February 15, 1992, 70 days

25. If Shutdown At End of Report Period, Estimated Date of Start-up: April 26, 1992

	Forecast	Achieved
INITIAL CRITICALITY	<u>05/85</u>	<u>05/25/85</u>
INITIAL ELECTRICITY	<u>06/85</u>	<u>06/10/85</u>
COMMERCIAL OPERATION	<u>11/85</u>	<u>01/28/86</u>

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 03/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

MONTH: February 1992

DAY AVERAGE DAILY POWER LEVEL

1	<u>1248</u>
2	<u>1251</u>
3	<u>1250</u>
4	<u>1247</u>
5	<u>1248</u>
6	<u>1248</u>
7	<u>1245</u>
8	<u>1232</u>
9	<u>1219</u>
10	<u>1206</u>
11	<u>1195</u>
12	<u>1182</u>
13	<u>1170</u>
14	<u>1147</u>
15	<u>4</u>
16	<u>0</u>

DAY AVERAGE DAILY POWER LEVEL

17	<u>0</u>
18	<u>0</u>
19	<u>0</u>
20	<u>0</u>
21	<u>0</u>
22	<u>0</u>
23	<u>0</u>
24	<u>0</u>
25	<u>0</u>
26	<u>0</u>
27	<u>0</u>
28	<u>0</u>
29	<u>0</u>

REFUELING INFORMATION

DOCKET NO. 50-528
UNIT NAME PVNGS-1
DATE 03/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

1. Scheduled date for next refueling shutdown.

The Unit 1 third refueling outage began on 02/15/92.

2. Scheduled date for restart following refueling.

04/26/92

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

Yes. Figures 3.2-2 and 3.2-2A of the Technical Specifications will require revision to reflect different DNBR margin limits.

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

Information to support the revision to Figures 3.2-2 and 3.2-2A was submitted on 12/24/91.

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.

The Unit 1, Cycle 4, nuclear design was performed using the DIT, ROCS, and MC computer codes described in Topical Report CENPD-266-P-A with the improvements in anisotropic scattering, higher order interface currents, nodal expansion method, and assembly discontinuity factors. Biases and uncertainties used in the Unit 1 Cycle 4 analysis were established by comparing results obtained from analytical calculation with measured data to insure that 95/95 confidence limits are maintained in the safety analysis.

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).

* The figures in 6.a and 6.b reflect fuel assembly locations at the beginning of the month. At the end of the month, the reactor was in the process of being defueled in accordance with the PVNGS refueling procedure.

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO.	<u>50-528</u>
UNIT NAME	<u>PVNGS-1</u>
DATE	<u>03/09/92</u>
COMPLETED BY	<u>K.A. Chavet</u>
TELEPHONE	<u>(602) 340-4718</u>

February 1992

02/01	0000	Unit began the month in Mode 1; 100% RX power.
02/08	0004	Began pre-refueling outage coast-down.
02/15	0215	Entered Mode 3 when RX was manually tripped from 20% for refueling outage.
02/16	1520	Entered Mode 4.
02/17	0209	Entered Mode 5.
02/24	1936	Entered Mode 6.
02/29	2400	Ended the month in Mode 6; fuel off-load in progress.



SHUTDOWNS AND POWER REDUCTIONS
February 1992

DOCKET NO 50-528
UNIT NAME PVNGS-1
DATE 03/09/92
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	357.7	C	2	N/A	N/A	N/A	RX manually tripped as un- entered third refueling outage.

¹F-Forced
S-Scheduled

²Reason:
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)

³Method:
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)

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

⁵Exhibit H-Same Source

NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-529
 UNIT NAME PVNGS-2
 DATE 03/09/92
 COMPLETED BY K.A. Chavet
 TELEPHONE (602) 340-4718

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 2
2. Reporting Period: February 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	696	1,440	47,760
12.	Hours Reactor Was Critical	696.0	1,272.7	32,618.5
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0
14.	Hours Generator was On-Line	696.0	1,189.4	31,903.7
15.	Unit Reserve Shutdown Hours	0.0	0.0	0
16.	Gross Thermal Energy Generated (MWH)	2,642,730	4,190,987	117,137,205
17.	Gross Electrical Energy Generated (MWH)	924,600	1,449,400	40,855,470
18.	Net Electrical Energy Generated (MWH)	871,910	1,349,664	38,239,879
19.	Unit Service Factor (%)	100.0%	82.6%	66.8%
20.	Unit Availability Factor (%)	100.0%	82.6%	66.8%
21.	Unit Capacity Factor (Using MDC Net)	102.6%	76.8%	65.6%
22.	Unit Capacity Factor (Using DER Net)	98.6%	73.8%	63.0%
23.	Unit Forced Outage Rate (%)	0.0%	4.7%	7.3%

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

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 03/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

MONTH: February 1992

DAY	AVERAGE DAILY POWER LEVEL
1	<u>1256</u>
2	<u>1260</u>
3	<u>1258</u>
4	<u>1257</u>
5	<u>1253</u>
6	<u>1253</u>
7	<u>1255</u>
8	<u>1255</u>
9	<u>1255</u>
10	<u>1254</u>
11	<u>1254</u>
12	<u>1254</u>
13	<u>1254</u>
14	<u>1257</u>
15	<u>1254</u>
16	<u>1254</u>

DAY	AVERAGE DAILY POWER LEVEL
17	<u>1252</u>
18	<u>1255</u>
19	<u>1257</u>
20	<u>1254</u>
21	<u>1253</u>
22	<u>1253</u>
23	<u>1254</u>
24	<u>1257</u>
25	<u>1257</u>
26	<u>1256</u>
27	<u>1258</u>
28	<u>1255</u>
29	<u>1254</u>



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REFUELING INFORMATION

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 03/09/92
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.
1/1/93
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.

The Unit 2, Cycle 5, reload should be typical to previous PVNGS cycles.
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.

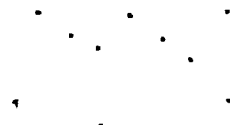
2004 (18 Month reloads and full core discharge capability).

SUMMARY OF OPERATING EXPERIENCE FOR THE MONTH

DOCKET NO. 50-529
UNIT NAME PVNGS-2
DATE 03/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

February 1992

02/01	0000	Unit began the month in Mode 1; 100% RX power.
02/29	2400	Ended the month in Mode 1; 100% RX power.



SHUTDOWNS AND POWER REDUCTIONS
February 1992

DOCKET NO 50-529
UNIT NAME PVNGS-2
DATE 03/09/92
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
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No reactor shutdowns or significant power reductions occurred during the month.

¹F-Forced
S-Scheduled

²Reason:
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)

³Method:
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)

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for Preparation of the Data
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(NUREG 0161)

⁵Exhibit H-Same Source

NRC MONTHLY OPERATING REPORT

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 03/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

OPERATING STATUS

1. Unit Name: Palo Verde Nuclear Generating Station, Unit 3
2. Reporting Period: February 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	696	1,440	36,336
12.	Hours Reactor was Critical	696.0	1,407.8	25,405.5
13.	Reactor Reserve Shutdown Hours	0.0	0.0	0.0
14.	Hours Generator was On-Line	696.0	1,398.4	24,997.8
15.	Unit Reserve Shutdown Hours	0.0	0.0	0.0
16.	Gross Thermal Energy Generated (MWH)	2,611,211	5,253,594	91,765,003
17.	Gross Electrical Energy Generated (MWH)	917,600	1,848,000	32,166,700
18.	Net Electrical Energy Generated (MWH)	867,648	1,744,544	30,262,469
19.	Unit Service Factor (%)	100.0%	97.1%	68.8%
20.	Unit Availability Factor (%)	100.0%	97.1%	68.8%
21.	Unit Capacity Factor (Using MDC Net)	102.1%	99.2%	68.2%
22.	Unit Capacity Factor (Using DER Net)	98.2%	95.4%	65.6%
23.	Unit Forced Outage Rate (%)	0.0%	2.9%	8.9%

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	<u>07/87</u>	<u>10/25/87</u>
INITIAL ELECTRICITY	<u>07/87</u>	<u>11/28/87</u>
COMMERCIAL OPERATION	<u>09/87</u>	<u>01/08/88</u>

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 03/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

MONTH: February 1992

DAY AVERAGE DAILY POWER LEVEL

1	<u>1266</u>
2	<u>1268</u>
3	<u>1266</u>
4	<u>1265</u>
5	<u>1061</u>
6	<u>977</u>
7	<u>1258</u>
8	<u>1263</u>
9	<u>1263</u>
10	<u>1265</u>
11	<u>1263</u>
12	<u>1263</u>
13	<u>1264</u>
14	<u>1267</u>
15	<u>1248</u>
16	<u>1268</u>

DAY AVERAGE DAILY POWER LEVEL

17	<u>1268</u>
18	<u>1266</u>
19	<u>1266</u>
20	<u>1266</u>
21	<u>1264</u>
22	<u>1264</u>
23	<u>1264</u>
24	<u>1265</u>
25	<u>1266</u>
26	<u>1266</u>
27	<u>1267</u>
28	<u>1266</u>
29	<u>1267</u>

REFUELING INFORMATION

DOCKET NO. 50-530
UNIT NAME PVNGS-3
DATE 03/09/92
COMPLETED BY K.A. Chavet
TELEPHONE (602) 340-4718

1. Scheduled date for next refueling shutdown.
09/15/92, 3rd refueling
2. Scheduled date for restart following refueling.
11/14/92
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.

A Technical Specification change request was submitted to the NRC on December 20, 1991, to allow the use of advanced zircaloy-based cladding alloys instead of Zircaloy-4 on up to 80 fuel rods in two fuel assemblies.
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 03/09/92
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February 1992

02/01	0000	Unit began the month in Mode 1; 100% RX power.
02/05	1526	RX power cutback to 60% due to manual trip of feedwater pump 'B'. Condensate pump 'A' tripped resulting in low suction pressure at both feedwater pumps. Feedwater pump 'B' was tripped as a protective measure to reduce the effect of the transient.
02/06	1623	RX power at 100%.
02/29	2400	Ended the month in Mode 1; 100% RX power.

SHUTDOWNS AND POWER REDUCTIONS
February 1992

DOCKET NO 50-530
UNIT NAME PVNGS-3
DATE 03/09/92
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	02/05/92	F	25.0	A	5	N/A	N/A	N/A	RX power cutback to 6 after manual trip of 'B' feedwater pump. Condensate pump 'A' tripped causing low suction pressure to the feedwater pumps.

¹F-Forced
S-Scheduled

²Reason:
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)

³Method:
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)

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⁵Exhibit H-Same Source

