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April 4, 1997

Beaver Valley Power Station
Unit 1 - Docket No. 50-334, License No. DPR-66
Unit 2 - Docket No. 50-412, License No. NPF-73
Monthly Operating Report

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

In accordance with Appendix A, Technical Specifications, the Monthly Operating Report is submitted for Unit 1 and Unit 2 for the month of March, 1997.

Respectfully,

R. L. LeGrand
Division Vice President,
Nuclear Operations /
Plant Manager

DTJ/slp

Enclosures

cc: NRC Regional Office
King of Prussia, PA

150147



The Nuclear Professionals

9704160002 970331
PDR ADOCK 05000334
R PDR



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NARRATIVE SUMMARY OF
MONTHLY OPERATING EXPERIENCE

UNIT 1

MARCH 1997

March 1 through March 18	The Unit operated at a nominal value of 100% output
March 19	The Unit experienced a Reactor Trip from 100% output at 0606 hours when the Main Unit Generator output breakers opened due to inadvertent operation of a bus backup timer relay in the 345 KV distribution system. Just prior to the event, a phase-to-ground fault occurred on a 345 KV line in the Ohio Edison System. The fault was sensed by the Beaver Valley switchyard electrical protection circuitry that inadvertently operated causing a Main Unit Generator/Turbine Trip and subsequent Reactor Trip. The Unit was subsequently stabilized in Mode 3.
March 20	The Unit commenced a plant cooldown to Mode 5 at 1843 hours to repair a secondary side leak at the "C" Steam Generator hand hole flange.
March 21	Mode 4 was entered at 0513 hours as the plant cooldown continued.
March 22	Mode 5 was entered at 0326 hours to enable repair of the secondary side leak at the "C" Steam Generator hand hole flange.
March 23 through March 26	The Unit remained shutdown in Mode 5 to perform repair of the secondary side leak at the "C" Steam Generator hand hole flange. During this time period, a small leak was also found at the "A" Steam Generator hand hole flange and was repaired. In addition, a body-to-bonnet flange joint leak was discovered on the "A" Reactor Coolant Loop Cold Leg Isolation Valve.
March 27 through March 31	The Unit remained shutdown in Mode 5 for the remainder of the report period to continue with repair of the "A" Reactor Coolant Loop Cold Leg Isolation Valve.

NARRATIVE SUMMARY OF
MONTHLY OPERATING EXPERIENCE

UNIT 1

MARCH 1997

(Continued)

In addition to the above, the following event which also occurred during the report period is being reported as required by Technical Specifications.

March 1
through
March 31

The Automatic Rod Position Deviation Monitor, although still functional, was not considered operable per Technical Specifications. The limiting condition for operation as specified in the Technical Specifications was met because the deviations between the indicated rod positions were verified to be within their 12 step limits by obtaining analog/digital rod positions at least once every 4 hours.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-334
UNIT BVPS Unit 1
DATE April 2, 1997
COMPLETED BY David T. Jones
TELEPHONE (412) 393-4962

MONTH March 1997

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>818</u>	17	<u>826</u>
2	<u>823</u>	18	<u>826</u>
3	<u>829</u>	19	<u>826</u>
4	<u>826</u>	20	<u>0</u>
5	<u>825</u>	21	<u>0</u>
6	<u>827</u>	22	<u>0</u>
7	<u>829</u>	23	<u>0</u>
8	<u>825</u>	24	<u>0</u>
9	<u>828</u>	25	<u>0</u>
10	<u>827</u>	26	<u>0</u>
11	<u>831</u>	27	<u>0</u>
12	<u>831</u>	28	<u>0</u>
13	<u>830</u>	29	<u>0</u>
14	<u>824</u>	30	<u>0</u>
15	<u>830</u>	31	<u>0</u>
16	<u>830</u>		

INSTRUCTIONS

On this form, list the average daily unit power level MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

OPERATING DATA REPORT

DOCKET NO.: 50-334
 REPORT DATE: 04/03/97
 COMPLETEL BY: DAVID T. JONES
 TELEPHONE: (412) 393-4962

OPERATING STATUS

1. UNIT NAME: BEAVER VALLEY POWER STATION, UNIT 1		*****	
2. REPORTING PERIOD: MARCH 1997		*Notes	*
3. LICENSED THERMAL POWER (MWt):	2652	*	*
4. NAMEPLATE RATING (Gross MWe):	923	*	*
5. DESIGN ELECTRICAL RATING (Net MWe):	835	*	*
6. MAX. DEPENDABLE CAPACITY (Gross MWe):	860	*	*
7. MAX. DEPENDABLE CAPACITY (Net MWe):	810	*****	*
8. IF CHANGES OCCUR IN CAPACITY RATINGS SINCE LAST REPORT, GIVE REASONS:			
<hr/>			
<hr/>			
9. POWER LEVEL TO WHICH RESTRICTED, IF ANY (Net MWe):		None	
10. REASONS FOR RESTRICTIONS, IF ANY:		N/A	
<hr/>			
<hr/>			

	THIS MONTH	YEAR TO DATE	CUMULATIVE
11. HOURS IN REPORTING PERIOD:	744.0	2160.0	183360.0
12. NO. OF HRS. REACTOR WAS CRITICAL:	438.1	1854.1	122502.0
13. REACTOR RESERVE SHUTDOWN HOURS:	0.0	0.0	4482.8
14. HOURS GENERATOR WAS ON LINE:	438.1	1854.1	120340.7
15. UNIT RESERVE SHUTDOWN HOURS:	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GEN. (MWH):	1153954.0	4855766.0	292129508.5
17. GROSS ELECT. ENERGY GEN. (MWH):	383153.0	1619643.0	94487235.0
18. NET ELECTRICAL ENERGY GEN. (MWH):	357853.0	1527253.0	88388822.0
19. UNIT SERVICE FACTOR: (PERCENT)	58.9	85.8	67.4
20. UNIT AVAILABILITY FACTOR: (PERCENT)	58.9	85.8	67.4
21. UNIT CAPACITY FACTOR (MDC):PCT	39.4	87.3	61.8
22. UNIT CAPACITY FACTOR (DER):PCT	57.6	84.7	60.0
23. UNIT FORCED OUTAGE RATE: (PERCENT)	41.1	14.2	15.0

24. SHUTDOWNS SCHEDULED OVER NEXT SIX MONTHS (TYPE, DATE, AND DURATION OF EACH):
THE UNIT'S 45 DAY 12TH REFUELING OUTAGE IS SCHEDULED TO BEGIN ON 9/5/97. THE
UNIT IS CURRENTLY SHUTDOWN TO REPAIR THE "A" RCS COLD LEG ISOLATION VALVE.

25. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: 4/10/97

26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION):

	FORECAST	ACHIEVED
INITIAL CRITICALITY	<u>N/A</u>	<u>N/A</u>
INITIAL ELECTRICITY	<u>N/A</u>	<u>N/A</u>
COMMERCIAL OPERATION	<u>N/A</u>	<u>N/A</u>

UNIT SHUTDOWNS AND POWER REDUCTIONS ($\geq 20\%$)

Docket No. 50-334

Unit Name BVPS Unit #1

Date April 2, 1997

Completed By David T. Jones

Telephone (412) 393-4962

REPORT MONTH March 1997

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
1	970319	F	36.6	A	3	1-97-005	EA	RELAYX	The Unit experienced a Reactor Trip from 100% output when the Main Unit Generator output breakers opened due to inadvertent operation of a bus backup timer relay in the 345 KV distribution system following a phase-to-ground fault on a 345 KV line in the Ohio Edison System. The inadvertent operation of the bus backup timer relay was due to incorrect wiring in the field and on the wiring diagram. Both have been modified and the relay has been proof tested satisfactory.
2	970320	F	145.8	A	9	N/A	CH	HTEXCH	Subsequent to the Reactor Trip, the Unit cooled down to cold shutdown conditions to repair a secondary side leak at both the "A" and "C" Steam Generator hand hole flanges.
3	970326	F	123.5	A	9	N/A	CB	VALVEX	The Unit remained in cold shutdown to repair a body-to-bonnet flange joint leak on the "A" Reactor Coolant Loop Cold Leg Isol Valve.

¹
F-Forced
S-Scheduled

²
Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Exam
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

³
Method:
1-Manual
2-Manual Scram
3-Automatic Scram
4-Cont'd. from Previous Month
5-Reduction
9-Other

⁴
Exhibit F-Instructions for Preparation of Data Entry
Sheets for Licensee Event Report (LER) File
(NUREG0161).

⁵
Exhibit H-Same Source

NARRATIVE SUMMARY OF
MONTHLY OPERATING EXPERIENCE

UNIT 2

MARCH 1997

March 1 through March 18	The Unit operated at a nominal value of 100% output.
March 19	The Unit experienced a Reactor Trip from 100% output at 0607 hours when the Main Unit Generator output breakers opened due to inadvertent operation of a bus backup timer relay in the 345 KV distribution system. Just prior to the event, a phase-to-ground fault occurred on a 345 KV line in the Ohio Edison System. The fault was sensed by the Beaver Valley switchyard electrical protection circuitry that inadvertently operated causing a Main Unit Generator/Turbine Trip and subsequent Reactor Trip. The Unit was subsequently stabilized in Mode 3. A plant cooldown to Mode 5 was commenced at 1256 hours to investigate the cause for low Auxiliary Feedwater System flow to the "B" Steam Generator observed following the Reactor Trip. Mode 4 was entered at 1731 hours as the plant cooldown continued.
March 20	Mode 5 was entered at 1230 hours to enable investigation of the cause for the low Auxiliary Feedwater (AFW) System flow to the "B" Steam Generator. The investigation determined that the seat to the "B" AFW to Steam Generator nozzle check valve had dislodged, thereby minimizing the amount of AFW System flow to the "B" Steam Generator.
March 21 through March 27	The Unit remained in Mode 5 to repair/modify the "B" AFW to Steam Generator nozzle check valve. Similar modifications to the "A" and "C" AFW to Steam Generator nozzle check valves were also performed during this time period.
March 28	Following satisfactory completion of repairs/modifications and testing of the "A", "B" and "C" AFW to Steam Generator nozzle check valves, the Unit began to heat up and entered Mode 4 at 2004 hours.
March 20	Mode 3 was entered at 1010 hours.
March 30	The Unit entered Mode 2 at 1215 hours. The Reactor was taken critical at 1400 hours. Mode 1 was entered at 1616 hours. The Main Unit Generator was synchronized to the electrical grid at 2236 hours, and output was escalated towards full power.

NARRATIVE SUMMARY OF
MONTHLY OPERATING EXPERIENCE

UNIT 2

MARCH 1997

(Continued)

March 31

At 0601 hours with the Unit at approximately 37% output, the "B" Heater Drain Pump was shutdown due to elevated bearing temperatures. At 1028 hours, the Unit resumed power escalation to 45% output while evaluation of the "B" Heater Drain Pump bearing temperatures continued. The Unit achieved an output of approximately 45% at 1105 hours. Upon satisfactory evaluation of the "B" Heater Drain Pump bearing temperatures, the Unit resumed power escalation at 1831 hours. At 2024 hours, power escalation was halted at approximately 59% output. The Unit remained at approximately 59% output for the remainder of the report period to complete repair of the mechanical seal on the "A" Main Feedwater Pump.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-412
UNIT BVPS Unit 2
DATE April 3, 1997
COMPLETED BY David T. Jones
TELEPHONE (412) 393-4962

MONTH March 1997

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>832</u>	17	<u>835</u>
2	<u>839</u>	18	<u>837</u>
3	<u>843</u>	19	<u>839</u>
4	<u>839</u>	20	<u>0</u>
5	<u>838</u>	21	<u>0</u>
6	<u>845</u>	22	<u>0</u>
7	<u>845</u>	23	<u>0</u>
8	<u>842</u>	24	<u>0</u>
9	<u>843</u>	25	<u>0</u>
10	<u>842</u>	26	<u>0</u>
11	<u>840</u>	27	<u>0</u>
12	<u>839</u>	28	<u>0</u>
13	<u>839</u>	29	<u>0</u>
14	<u>836</u>	30	<u>34</u>
15	<u>841</u>	31	<u>281</u>
16	<u>838</u>		

INSTRUCTIONS

On this form, list the average daily unit power level MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

OPERATING DATA REPORT

DOCKET NO.: 50-412
 REPORT DATE: 04/03/97
 COMPLETED BY: DAVID T. JONES
 TELEPHONE: (412) 393-4962

OPERATING STATUS

1. UNIT NAME: BEAVER VALLEY POWER STATION, UNIT 2		*****	
2. REPORTING PERIOD: MARCH 1997		*Notes	*
3. LICENSED THERMAL POWER (MWt):	2652	*	*
4. NAMEPLATE RATING (Gross MWe):	923	*	*
5. DESIGN ELECTRICAL RATING (Net MWe):	836	*	*
6. MAX. DEPENDABLE CAPACITY (Gross MWe):	870	*	*
7. MAX. DEPENDABLE CAPACITY (Net MWe):	820	*****	*

8. IF CHANGES OCCUR IN CAPACITY RATINGS SINCE LAST REPORT, GIVE REASONS:

9. POWER LEVEL TO WHICH RESTRICTED, IF ANY (Net MWe): None

10. REASONS FOR RESTRICTIONS, IF ANY: N/A

	THIS MONTH	YEAR TO DATE	CUMULATIVE
11. HOURS IN REPORTING PERIOD:	744.0	2160.0	82143.0
12. NO. OF HRS. REACTOR WAS CRITICAL:	472.0	1682.7	69403.7
13. REACTOR RESERVE SHUTDOWN HOURS:	0.0	0.0	0.0
14. HOURS GENERATOR WAS ON LINE:	463.5	1656.3	68921.0
15. UNIT RESERVE SHUTDOWN HOURS:	0.0	0.0	0.0
16. GROSS THERMAL ENERGY GEN. (MWH):	1186074.0	4192035.0	171403878.0
17. GROSS ELECT. ENERGY GEN. (MWH):	394465.0	1394591.0	55891014.0
18. NET ELECTRICAL ENERGY GEN. (MWH):	369684.0	1312451.0	52801047.0
19. UNIT SERVICE FACTOR: (PERCENT)	62.3	76.7	83.9
20. UNIT AVAILABILITY FACTOR: (PERCENT)	62.3	76.7	83.9
21. UNIT CAPACITY FACTOR (MDC): PCT	60.6	74.1	78.0
22. UNIT CAPACITY FACTOR (DER): PCT	59.4	72.7	76.9
23. UNIT FORCED OUTAGE RATE: (PERCENT)	37.7	23.3	5.0

24. SHUTDOWNS SCHEDULED OVER NEXT SIX MONTHS (TYPE, DATE, AND DURATION OF EACH):

25. IF SHUT DOWN AT END OF REPORT PERIOD, ESTIMATED DATE OF STARTUP: _____

26. UNITS IN TEST STATUS (PRIOR TO COMMERCIAL OPERATION):

	FORECAST	ACHIEVED
INITIAL CRITICALITY	<u>N/A</u>	<u>N/A</u>
INITIAL ELECTRICITY	<u>N/A</u>	<u>N/A</u>
COMMERCIAL OPERATION	<u>N/A</u>	<u>N/A</u>

UNIT SHUTDOWNS AND POWER REDUCTIONS (≥20%)

REPORT MONTH March 1997

Docket No. 50-412
 Unit Name BVPS Unit #2
 Date April 2, 1997
 Completed By David T. Jones
 Telephone (412) 393-4962

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
5	970319	F	6.8	A	3	1-97-005	EA	RELAYX	The Unit experienced a Reactor Trip from 100% output when the Main Unit Generator output breakers opened due to inadvertent operation of a bus backup timer relay in the 345 KV distribution system following a phase-to-ground fault on a 345 KV line in the Ohio Edison System. The inadvertent operation of the bus backup timer relay was due to incorrect wiring in the field and on the wiring diagram. Both have been modified and the relay has been proof tested satisfactory.
6	970319	F	237.2	A	9	N/A	WG	VALVEX	Subsequent to the Reactor Trip, the Unit cooled down to cold shutdown conditions to repair/modify the Auxiliary Feedwater to Steam Generator nozzle check valves.
7	970330	F	36.5	H	9	N/A	ZZ	ZZZZZZ	The Unit remained shutdown to complete preparations for startup.

¹
 F-Forced
 S-Scheduled

²
 Reason:
 A-Equipment Failure (Explain)
 B-Maintenance or Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Exam
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

³
 Method:
 1-Manual
 2-Manual Scram
 3-Automatic Scram
 4-Cont'd. from Previous Month
 5-Reduction
 9-Other

⁴
 Exhibit F-Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG0161).

⁵
 Exhibit H-Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS ($\geq 20\%$)

Docket No. 50-412

Unit Name BVPS Unit #2

Date April 2, 1997

Completed By David T. Jones

Telephone (412) 393-4962

REPORT MONTH March 1997

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
8	970331	F	0	H	9	N/A	HH	PUMPXX	The Unit halted escalation to full power at approximately 45% output to evaluate elevated bearing temperatures on the "B" Heater Drain Pump. The temperatures were subsequently evaluated as acceptable.
9	970331	F	0	H	9	N/A	CH	PUMPXX	The Unit halted escalation to full power at approximately 59% output to repair the mechanical seal on the "A" Main Feedwater Pump.

¹
F-Forced
S-Scheduled

²
Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Exam
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

³
Method:
1-Manual
2-Manual Scram
3-Automatic Scram
4-Cont'd. from Previous Month
5-Reduction
9-Other

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Sheets for Licensee Event Report (LER) File
(NUREG0161).

⁵
Exhibit H-Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS ($\geq 20\%$)

Docket No. 50-412

Unit Name BVPS Unit #2

Date April 2, 1997

Completed By David T. Jones

Telephone (412) 393-4962

REPORT MONTH March 1997

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
5	970319	F	6.8	A	3	1-97-005	EA	RELAYX	The Unit experienced a Reactor Trip from 100% output when the Main Unit Generator output breakers opened due to inadvertent operation of a bus backup timer relay in the 345 KV distribution system following a phase-to-ground fault on a 345 KV line in the Ohio Edison System. The inadvertent operation of the bus backup timer relay was due to incorrect wiring in the field and on the wiring diagram. Both have been modified and the relay has been proof tested satisfactory.
6	970319	F	237.2	A	9	N/A	WG	VALVEX	Subsequent to the Reactor Trip, the Unit cooled down to cold shutdown conditions to repair/modify the Auxiliary Feedwater to Steam Generator nozzle check valves.
7	970330	F	36.5	H	9	N/A	ZZ	ZZZZZZ	The Unit remained shutdown to complete preparations for startup.

¹
F-Forced
S-Scheduled

²
Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Exam
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

³
Method:
1-Manual
2-Manual Scram
3-Automatic Scram
4-Cont'd. from Previous Month
5-Reduction
9-Other

⁴
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Sheets for Licensee Event Report (LER) File
(NUREG0161).

⁵
Exhibit H-Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS ($\geq 20\%$)

Docket No. 50-412

Unit Name BVPS Unit #2

Date April 2, 1997

Completed By David T. Jones

Telephone (412) 393-4962

REPORT MONTH March 1997

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
8	970331	F	0	H	9	N/A	HH	PUMPXX	The Unit halted escalation to full power at approximately 45% output to evaluate elevated bearing temperatures on the "B" Heater Drain Pump. The temperatures were subsequently evaluated as acceptable.
9	970331	F	0	H	9	N/A	CH	PUMPXX	The Unit halted escalation to full power at approximately 59% output to repair the mechanical seal on the "A" Main Feedwater Pump.

¹
F-Forced
S-Scheduled

²
Reason:
A-Equipment Failure (Explain)
B-Maintenance or Test
C-Refueling
D-Regulatory Restriction
E-Operator Training & License Exam
F-Administrative
G-Operational Error (Explain)
H-Other (Explain)

³
Method:
1-Manual
2-Manual Scram
3-Automatic Scram
4-Cont'd. from Previous Month
5-Reduction
9-Other

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