

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION

MONTHLY OPERATING REPORT

MONTH February YEAR 1984

APPROVED:


STATION MANAGER

8403300055 840229
PDR ADOCK 05000338
R PDR

TE24

OPERATING DATA REPORT

DOCKET NO. 50-338
DATE 03-04-84
COMPLETED BY Joan N. Lee
TELEPHONE (703) 894-5151 X2527

OPERATING STATUS

Notes:

1. Unit Name: North Anna 1
2. Reporting Period: February 1984
3. Licensed Thermal Power (MWt): 2775
4. Nameplate Rating (Gross MWe): 947
5. Design Electrical Rating (Net MWe): 907
6. Maximum Dependable Capacity (Gross MWe): 930
7. Maximum Dependable Capacity (Net MWe): 883
8. If Changes Occur in Capacity Ratings (Items No. 3 thru 7) Since Last Report, Give Reasons:

No change in gross MDC. MDC net changed to reflect Station Service loads effective 02-01-84.

9. Power Level To Which Restricted, If Any (Net MWe): N/A
10. Reasons For Restrictions, If Any: N/A

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	696	1,440	49,881.0
12. Number of Hours Reactor Was Critical	494.6	708.6	34,295.1
13. Reactor Reserve Shutdown Hours	7.1	7.1	3,028.6
14. Hours Generator On-Line	490.5	687.8	33,349.4
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,293,539	1,833,192	86,884,965
17. Gross Electrical Energy Generated (MWH)	436,500	618,215	28,002,402
18. Net Electrical Energy Generated (MWH)	413,439	586,119	26,417,293
19. Unit Service Factor	70.4	47.8	66.9
20. Unit Availability Factor	70.4	47.8	66.9
21. Unit Capacity Factor (Using MDC Net)	67.3	46.3	60.4
22. Unit Capacity Factor (Using DER Net)	65.4	44.9	58.3
23. Unit Forced Outage Rate	29.6	52.2	12.4
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

Unit 1 Refueling Outage 05-11-84

Scheduled Fall Maintenance 11-23-84

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
INITIAL ELECTRICITY
COMMERCIAL OPERATION

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-338

UNIT NA-1

DATE 03-04-84

COMPLETED BY Joan N. Lee

TELEPHONE 703-894-5151X2527

MONTH February

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	<u>0</u>
2	<u>0</u>
3	<u>0</u>
4	<u>0</u>
5	<u>0</u>
6	<u>0</u>
7	<u>0</u>
8	<u>81</u>
9	<u>221</u>
10	<u>416</u>
11	<u>693</u>
12	<u>701</u>
13	<u>775</u>
14	<u>896</u>
15	<u>897</u>
16	<u>898</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	<u>898</u>
18	<u>893</u>
19	<u>876</u>
20	<u>898</u>
21	<u>900</u>
22	<u>900</u>
23	<u>900</u>
24	<u>899</u>
25	<u>895</u>
26	<u>892</u>
27	<u>900</u>
28	<u>899</u>
29	<u>898</u>
30	<u></u>
31	<u></u>

INSTRUCTIONS

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

UNIT SHUTDOWN AND POWER REDUCTIONS

EXPLANATION SHEET DOCKET NO. 50-338

REPORT MONTH February UNIT NAME NA-1

YEAR 1984 DATE 03-04-84

COMPLETED BY Joan Lee

84-02	(F)	Outage continued from last month. Unit was on-line at 0924 on February 8, 1984.
84-03	(F) (1)	At 0958 on February 8, 1984 a reactor trip was caused by a turbine trip. High vibration on the EHC pumps caused a low EHC level turbine trip. Repairs were made and Unit 1 was on-line at 1410 on February 8, 1984. This month ended with unit at 100% power.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-338
 UNIT NAME North Anna 1
 DATE 03-04-84
 COMPLETED BY Joan Lee
 TELEPHONE (703) 894-5151 X2527

REPORT MONTH February

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
84-02	840108	F	201.4	A	2	NA	NA	NA	Outage continues from last month. Ended month of January with unit off-line. Unit was on-line February 8, 1984 at 0924.
84-03	840208	F	4.1	A	3	NA	NA	NA	High vibration on EHC pumps caused a low EHC level turbine trip. Repairs made and unit back on-line at 1410 February 8, 1984.
84-04	840218	S		B	NA	NA	NA	NA	Unit ramped down for Turbine Valve Freedom Test. Unit returned to full power.
84-05	840225	S		B	NA	NA	NA	NA	Unit ramped down for Turbine Valve Freedom Test. Unit returned to full power. Ended this month with unit at 100% power.

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-Continuations
 5-Load Reduction
 9-Other

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

⁵
 Exhibit H - Same Source

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION

UNIT NO. 1

MONTH February

SUMMARY OF OPERATING EXPERIENCE

Listed below in chronological sequence is a summary of operating experiences for this month which required load reductions or resulted in significant non-load related incidents.

<u>DATE</u>	<u>TIME</u>	<u>DATA</u>
February 1, 1984	0000	Started this month with Unit in Mode 5 due to the Reactor Coolant System leakage. Repair of steam generator tube leaks in progress.
February 7, 1984	0815	Entered Mode 4.
February 8, 1984	0512	Unit 1 Reactor critical.
	0815	Entered Mode 1.
	0924	Unit 1 generator on-line.
	0958	Reactor trip due to high vibration on EHC pump causing a low EHC level turbine trip.
February 8, 1984	1221	Reactor critical.
	1410	Unit 1 on-line.
	1450	Holding power at 30%, 223 MW for chemistry hold.
February 10, 1984	0500	Commenced ramp up to 100% at 3% per hour.
February 13, 1984	1838	Unit 1 at 100% power.
February 18, 1984	2050	Commenced rampdown for Turbine Valve Freedom Test.
February 19, 1984	0019	Commenced Turbine Valve Freedom Test. 91% power 867 MW.
	0044	Completed Turbine Valve Freedom Test. System Operator requested to hold load on Unit 1 and reduce load on Unit 2 by 150 MW due to low system load.

February 19, 1984	0427	Commenced power increase to 100% per System Operator.
	0735	Unit at 100% power.
February 25, 1984	2058	Commenced rampdown for Turbine Valve Freedom Test at 3% per hour.
February 26, 1984	0005	Holding power at 860 MW, 91% power.
February 26, 1984	0020	Commenced Turbine Valve Freedom Test.
	0049	Completed Turbine Valve Freedom Test. Commenced increasing power at 3% per hour.
	0400	Unit at 100%.
February 29, 1984	2400	Ended this month with unit at 100% power.

OPERATING DATA REPORT

DOCKET NO. 50-339
DATE 03-04-84
COMPLETED BY Joan N. Lee
TELEPHONE (703) 894-5151 X2527

OPERATING STATUS

Notes:

1. Unit Name: North Anna 2
2. Reporting Period: February 1984
3. Licensed Thermal Power (MWt): 2775
4. Nameplate Rating (Gross MWe): 947
5. Design Electrical Rating (Net MWe): 907
6. Maximum Dependable Capacity (Gross MWe): 939
7. Maximum Dependable Capacity (Net MWe): 890
8. If Changes Occur in Capacity Ratings (Items No. 3 thru 7) Since Last Report, Give Reasons:

N/A

9. Power Level To Which Restricted, If Any (Net MWe): N/A
10. Reasons For Restrictions, If Any: N/A

	This Month	Yr.-to-Date	Cumulative
11. Hours In Reporting Period	696	1,440	28,152
12. Number of Hours Reactor Was Critical	621.7	1,365.7	21,012.6
13. Reactor Reserve Shutdown Hours	3.5	3.5	3,783.5
14. Hours Generator On-Line	584.5	1,328.5	20,835.6
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,474,396	3,431,253	53,847,294
17. Gross Electrical Energy Generated (MWH)	483,285	1,123,980	17,838,347
18. Net Electrical Energy Generated (MWH)	457,966	1,065,901	16,917,983
19. Unit Service Factor	84.0	92.3	74.0
20. Unit Availability Factor	84.0	92.3	74.0
21. Unit Capacity Factor (Using MDC Net)	73.9	83.2	67.6
22. Unit Capacity Factor (Using DER Net)	72.5	81.6	66.3
23. Unit Forced Outage Rate	6.2	6.2	6.9
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

Scheduled Maintenance 03-30-84

Unit 2 Refueling Outage 09-21-84

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
INITIAL ELECTRICITY
COMMERCIAL OPERATION

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-339

UNIT NA-2

DATE 03-04-84

COMPLETED BY Joan N. Lee

TELEPHONE 703-894-5151X2527

MONTH February

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>869</u>
2	<u>866</u>
3	<u>0</u>
4	<u>0</u>
5	<u>0</u>
6	<u>0</u>
7	<u>33</u>
8	<u>208</u>
9	<u>211</u>
10	<u>620</u>
11	<u>863</u>
12	<u>867</u>
13	<u>824</u>
14	<u>837</u>
15	<u>804</u>
16	<u>840</u>

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
17	<u>834</u>
18	<u>857</u>
19	<u>841</u>
20	<u>837</u>
21	<u>867</u>
22	<u>870</u>
23	<u>873</u>
24	<u>874</u>
25	<u>863</u>
26	<u>870</u>
27	<u>869</u>
28	<u>870</u>
29	<u>872</u>
30	<u></u>
31	<u></u>

INSTRUCTIONS

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

UNIT SHUTDOWN AND POWER REDUCTIONS

EXPLANATION SHEET DOCKET NO. 50-339

REPORT MONTH February UNIT NAME NA-2

YEAR 1984 DATE 03-04-84

COMPLETED BY Joan Lee

84-05 F (1) On February 2, 1984, at 2227 Unit 2 commenced ramping down due to sulfuric acid released into the Unit 2 condensate stream and ultimately into the unit's steam generators. By 0335 February 3, 1984, the Unit was off-line. The unit was cooled down and chemical clean up began immediately. The unit was returned to service on February 7, 1984 at 1907.

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-339
 UNIT NAME North Anna 2
 DATE 03-04-84
 COMPLETED BY Joan Lee
 TELEPHONE (703) 894-5151 X2527

REPORT MONTH February

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
84-05	840203	F	111.5	G	2	NA	NA	NA	Ramped down due to injection of sulfuric acid into Unit 2 condensate stream and ultimately into the Unit's steam generators. Following chemical clean up the unit was returned to service.
84-06	840210	S		B		NA	NA	NA	Ramped down for Turbine Valve Freedom Test. Unit returned to full power.
84-07	840212	S		B		NA	NA	NA	Ramped down for load following. Unit returned to full power.
84-08	840213	S		B	NA	NA	NA	NA	Ramped down for load following. Unit returned to full power.
84-09	840214	S		B	NA	NA	NA	NA	Ramped down for load following. Unit returned to full power.

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 B-Maintenance or Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
 F-Administrative
 G-Operational Error (Explain)
 H-Other (Explain)

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UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-339
 UNIT NAME North Anna 2
 DATE 03-04-84
 COMPLETED BY Joan Lee
 TELEPHONE: (703) 894-5151 X2527

REPORT MONTH February

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
84-10	840216	S		B	NA	NA	NA	NA	Ramped down for load following. Unit returned to full power.
84-11	840219	S		B	NA	NA	NA	NA	Ramped down for load following. Unit returned to full power.
84-12	840219	S		B	NA	NA	NA	NA	Ramped down for load following. Unit returned to full power.
84-13	840225	S		B	NA	NA	NA	NA	Ramped down for Turbine Valve Freedom Test. Unit returned to full power. Ended this month with Unit at 100%.

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 A-Equipment Failure (Explain)
 B-Maintenance or Test
 C-Refueling
 D-Regulatory Restriction
 E-Operator Training & License Examination
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VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION

UNIT NO. 2

MONTH February

SUMMARY OF OPERATING EXPERIENCE

Listed below in chronological sequence is a summary of operating experiences for this month which required load reductions or resulted in significant non-load related incidents.

<u>DATE</u>	<u>TIME</u>	<u>DATA</u>
February 1, 1984	0000	Started this month with Unit at 100% power.
February 2, 1984	2228	Commenced ramp down at 150 MW per hour due to sulfuric acid injected into the Unit 2 condensate stream and ultimately into the Unit's steam generators.
February 3, 1984	0335	Generator off-line.
	0340	Tripped main turbine.
February 6, 1984	0556	Reactor critical.
February 7, 1984	1907	Unit 2 on-line.
February 8, 1984	0108	Unit at 30% power, 242 MW for chemistry hold.
February 10, 1984	0620	Commenced ramp up to 100% power.
	1026	Unit at 90%. Holding for calorimetric.
	1127	Increasing power to 100%.
	1213	Unit at 100% power.
	2310	Commenced rampdown to 850 MW for Turbine Valve Freedom Test.
	2339	Holding at 850 MW, 92% power.
	0015	Commenced Turbine Valve Freedom Test.
	0116	Completed Turbine Valve Freedom Test.
	0118	Commenced ramp up to 100%.
	0144	Unit at 100% power.

February 12, 1984	2340	Commenced rampdown for load following.
February 13, 1984	0202	Holding at 650 MW, 69% power per System Operator.
	0400	Commenced ramp up to 100% power.
	0557	Unit at 100%.
	2338	Commenced ramp down for load following.
	0020	Unit at 890 MW, power at 96%.
	0118	Unit stabilized at 750 MW.
	0355	Commenced ramp up to 100% power.
	0502	Stabilizing at 98% power for calorimetric.
	0525	Calorimetric complete. Unit at 100% power.
February 14, 1984	2345	Commenced ramp down for load following per System Operator.
February 15, 1984	0000	Continuing ramp down for load following. Unit at 94% power, 872 MW.
	0040	Informed by System Operator to continue ramp down to 675 MW.
	0122	Holding power at 675 MW.
	0156	Informed by System Operator to reduce power to 625 MW.
	0215	Stabilizing power at 625 MW.
	0438	Commenced ramp up per System Operator.
	0634	Stabilizing power at 90% for calorimetric.
	0740	Unit at 100% power.
February 16, 1984	0005	Commenced rampdown for load following.
	0055	Stabilized at 724 MW, 76% power.
	0242	Commenced ramp up per O.P. 2.1.
	0323	Holding at 824 MW, 86% power for calorimetric.
	0357	Completed calorimetric and commenced ramp up to 100% power.

February 16, 1984	0454	Unit at 100% power.
February 19, 1984	0050	Commencing ramp down for load following per System Operator.
	0150	Stabilizing power at 83% power, 775 MW.
	0505	Commenced ramp up to 100% power.
	0623	Unit at 100% power.
February 19, 1984	2325	Commenced ramp down for load following per System Operator.
February 20, 1984	0030	Power at 84%, 789 MW.
	0509	Commenced ramp up to 100% power.
February 20, 1984	0604	Unit at 100% power.
February 25, 1984	0007	Commenced ramp down for Turbine Valve Freedom Test.
	0044	Commenced Turbine Valve Freedom Test. Unit at 840 MW.
	0145	Turbine Valve Freedom Test complete. Commenced ramp up to 100%.
	0240	Unit at 100% power.
February 29, 1984	2400	Ended this month with Unit at 100% power.

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

March 14, 1984

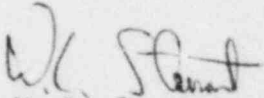
Mr. N. M. Haller, Director
Office of Management and Program Analysis
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Serial No. 135
NO/JHL:acm
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Dear Mr. Haller:

Enclosed is the Monthly Operating Report for North Anna Power Station Unit Nos. 1 and 2 for the month of February, 1984.

Very truly yours,


W. L. Stewart

Enclosure (3 copies)

cc: Mr. R. C. DeYoung, Director (12 copies)
Office of Inspection and Enforcement

Mr. James P. O'Reilly (1 copy)
Regional Administrator
Region II

Mr. M. W. Branch
NRC Resident Inspector
North Anna Power Station

IE24
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