

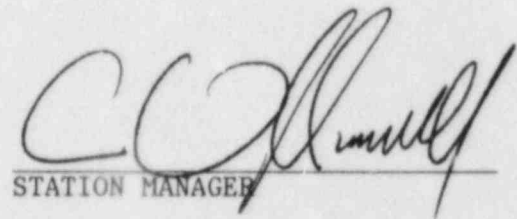
VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION

MONTHLY OPERATING REPORT

MONTH March YEAR 1984

APPROVED:


STATION MANAGER

8405020207 840416
PDR ADOCK 05000338
R PDR

OPERATING DATA REPORT

DOCKET NO. 50-338
 DATE 04-04-84
 COMPLETED BY Joan N. Lee
 TELEPHONE (703) 894-5151 2527

OPERATING STATUS

1. Unit Name: North Anna 1
2. Reporting Period: March, 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	744	2,184	50,625.0
12. Number of Hours Reactor Was Critical	744	1,452.6	35,039.1
13. Reactor Reserve Shutdown Hours	0	7.1	3,028.6
14. Hours Generator On-Line	744	1,431.8	34,093.4
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	2,058,504.0	3,891,696	88,943,469
17. Gross Electrical Energy Generated (MWH)	699,411	1,317,626	28,701,813
18. Net Electrical Energy Generated (MWH)	665,347	1,251,466	27,082,640
19. Unit Service Factor	100.0	65.6	67.3
20. Unit Availability Factor	100.0	65.6	67.3
21. Unit Capacity Factor (Using MDC Net)	101.3	66.5	61.0
22. Unit Capacity Factor (Using DER Net)	98.6	63.2	58.9
23. Unit Forced Outage Rate	0	52.2	12.4
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

Unit 1 Refueling Outage 05-11-84

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 04-04-84

COMPLETED BY Joan N. Lee

TELEPHONE 703-894-5151X2527

MONTH March

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>898</u>	17	<u>891</u>
2	<u>899</u>	18	<u>892</u>
3	<u>876</u>	19	<u>900</u>
4	<u>898</u>	20	<u>899</u>
5	<u>890</u>	21	<u>899</u>
6	<u>898</u>	22	<u>878</u>
7	<u>898</u>	23	<u>874</u>
8	<u>898</u>	24	<u>875</u>
9	<u>901</u>	25	<u>889</u>
10	<u>900</u>	26	<u>900</u>
11	<u>889</u>	27	<u>899</u>
12	<u>901</u>	28	<u>898</u>
13	<u>898</u>	29	<u>898</u>
14	<u>898</u>	30	<u>898</u>
15	<u>896</u>	31	<u>885</u>
16	<u>901</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 March UNIT NAME NA-1

YEAR 1984 DATE 04-04-84

COMPLETED BY Joan Lee

NO ENTRIES THIS MONTH.

UNIT SHUTDOWNS AND POWER REDUCTIONS

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

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
84-06	840303	B			5	NA	NA	NA	Unit 1 ramped down for Turbine Valve Freedom Test. Unit returned to full power.
84-07	840310	B			5	NA	NA	NA	Unit 1 ramped down for Turbine Valve Freedom Test. Unit returned to full power.
84-08	840317	B			5	NA	NA	NA	Unit 1 ramped down for Turbine Valve Freedom Test. Unit returned to full power.
84-09	840324	B			5	NA	NA	NA	Unit 1 ramped down for Turbine Valve Freedom Test. Unit returned to full power.
84-10	840331	B			5	NA	NA	NA	Unit 1 ramped down for Turbine Valve Freedom Test. Ended this month with unit at 94% power level at 881 MW for Turbine Valve Freedom Test.

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 March

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>
March 1, 1984	0000	Started this month with Unit at 100% power.
March 2, 1984	2354	Commenced rampdown for Turbine Valve Freedom Test.
March 3, 1984	0238	Commenced Turbine Valve Freedom Test.
	0320	Turbine Valve Freedom Test completed.
	0325	Commenced rampup to 100%.
	0730	Unit at 100% power.
March 10, 1984	2237	Commenced rampdown for Turbine Valve Freedom Test.
March 11, 1984	0210	Turbine Valve Freedom Test complete. Commenced ramping up to 100%.
	0528	Stabilized at 98% power for calorimetric.
	0612	Unit at 100% power.
March 17, 1984	2115	Commenced rampdown for Turbine Valve Freedom Test.
	2325	Turbine Valve Freedom Test complete. Increasing power to 100% at 3% per hour.
	2335	Stabilized power at 98% for calorimetric.
March 18, 1984	0350	Calorimetric complete. Re-commenced rampup to 100%.
	0438	Unit at 100% power.
March 24, 1984	2100	Commenced rampdown for Turbine Valve Freedom Test. 92% power 870 MW.

March 25, 1984	0105	Completed Turbine Valve Freedom Test. Commenced ramp up to 100% power.
March 25, 1984	0415	Stabilized power at 98% for calorimetric.
	0500	Calorimetric complete and unit at 100% power.
March 31, 1984	2150	Commencing rampdown to 860 MW power at 92% for Turbine Valve Freedom Test.
March 31, 1984	2400	Ended this month with unit at 94% power, 881 MW for Turbine Valve Freedom Test.

OPERATING DATA REPORT

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

OPERATING STATUS

Notes:

1. Unit Name: North Anna 2
2. Reporting Period: March 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	744	2,184	28,896
12. Number of Hours Reactor Was Critical	719.8	2,085.5	21,732.4
13. Reactor Reserve Shutdown Hours	0	3.5	3,783.5
14. Hours Generator On-Line	713.4	2,041.9	21,549.0
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,895,829	5,327,082	55,743,123
17. Gross Electrical Energy Generated (MWH)	619,216	1,743,196	18,457,563
18. Net Electrical Energy Generated (MWH)	587,855	1,653,756	17,505,838
19. Unit Service Factor	95.9	93.5	74.6
20. Unit Availability Factor	95.9	93.5	74.6
21. Unit Capacity Factor (Using MDC Net)	88.8	85.1	68.1
22. Unit Capacity Factor (Using DER Net)	87.1	83.5	66.8
23. Unit Forced Outage Rate	1.3	5.6	14.5
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

Unit 2 Refueling Outage 08-17-84

25. If Shut Down At End Of Report Period, Estimated Date of Startup: 04-09-84
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 04-04-84

COMPLETED BY Joan N. Lee

TELEPHONE 703-894-5151X2527

MONTH March

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

1	<u>871</u>
2	<u>871</u>
3	<u>872</u>
4	<u>868</u>
5	<u>871</u>
6	<u>854</u>
7	<u>869</u>
8	<u>869</u>
9	<u>869</u>
10	<u>865</u>
11	<u>870</u>
12	<u>868</u>
13	<u>560</u>
14	<u>292</u>
15	<u>629</u>
16	<u>720</u>

DAY AVERAGE DAILY POWER LEVEL
(MWe-Net)

17	<u>620</u>
18	<u>866</u>
19	<u>865</u>
20	<u>866</u>
21	<u>866</u>
22	<u>866</u>
23	<u>866</u>
24	<u>860</u>
25	<u>867</u>
26	<u>865</u>
27	<u>865</u>
28	<u>867</u>
29	<u>867</u>
30	<u>843</u>
31	<u>26</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 SHUTDOWNS AND POWER REDUCTIONS

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

REPORT MONTH March

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
84-14	840304	S		B		NA	NA	NA	Ramped down for Turbine Valve Freedom Test. Unit returned to full power.
84-15	840306	S		B	5	NA	NA	NA	Ramped down for load following. Unit returned to full power.
84-16	840309	S		B		NA	NA	NA	Ramped down for Turbine Valve Freedom Test. Unit returned to full power.
84-17	840313	F	9.5	H	3				Unit 2 Reactor Trip, due to low steam generator level. Steam generator level dropped when "A" main feed regulator valve failed shut due to a voltage spike which occurred when a process rack power supply was replaced.
84-17	840313	F		H					Repairs were made. Unit returned to full power.
84-18	840324	S		B		NA	NA	NA	Ramped down for Turbine Valve Freedom Test. Unit returned to full power.

1	2	3	4
F: Forced	Reason:	Method:	Exhibit F - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)
S: Scheduled	A-Equipment Failure (Explain)	1-Manual	
	B-Maintenance or Test	2-Manual Scram.	
	C-Refueling	3-Automatic Scram	
	D-Regulatory Restriction	4-Continuations	
	E-Operator Training & License Examination	5-Load Reduction	
	F-Administrative	9-Other	
	G-Operational Error (Explain)		
	H-Other (Explain)		5 Exhibit H - Same Source

UNIT SHUTDOWNS AND POWER REDUCTIONS

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

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
84-19	840331	S	21.1	B					Ramped down to to begin scheduled Spring Maintenance Outage. Ended this month with Unit 2 in Mode 5.

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

UNIT SHUTDOWN AND POWER REDUCTIONS

EXPLANATION SHEET DOCKET NO. 50-339
REPORT MONTH March UNIT NAME NA-2
YEAR 1984 DATE 04-04-84
COMPLETED BY Joan Lee

- 84-17 F (1) On March 13, 1984, at 1530 - Unit 2 reactor tripped due to low steam generator level. Steam generator level dropped when "A" main feed regulator valve failed shut due to a voltage spike which occurred when a process rack power supply was replaced. Repairs were made and commenced start up. Reactor critical at 1840 on March 13, 1984. At 2036 on March 13, 1984, Unit 2 had a reactor trip caused by S/G lo-lo level on "C" steam generator. Initiated auxiliary feed, restored level using main and auxiliary feed system. Commenced reactor start-up at 2241 on March 13, 1984 and by 0057 March 14, 1984 Unit 2 was on-line.
- 84-19 S (21) Commenced rampdown of Unit 2 for scheduled spring maintenance outage on March 30, 1984 at 2137. By March 31, 1984 Unit 2 was off-line. Ended this month with unit in Mode 5. Expected on-line date is April 9, 1984.

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION

UNIT NO. 2

MONTH March

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>
March 1, 1984	0000	Began this month with Unit at 100%.
March 4, 1984	0019	Commenced rampdown for Turbine Valve Freedom Test.
	0155	Turbine Valve Freedom test complete. Commenced ramp up to 100%.
	0302	Unit 2 at 100% power.
March 6, 1984	0130	Commenced rampdown for load follow.
	0225	Unit stabilized at 800 MW per System Operator.
	0405	Commenced ramp up to 100% power.
	0450	Stabilized power at 97% for calorimetric.
	0528	Calorimetric complete. Re-commenced ramp up to 100%.
	0605	Unit at 100% power.
March 9, 1984	2333	Commenced rampdown for Turbine Valve Freedom Test.
March 10, 1984	0046	Turbine Valve Freedom Test complete.
	0117	Commenced rampup to 98% power.
	0155	Stabilized power at 98% for calorimetric.
	0212	Calorimetric complete. Commenced ramp up to 100%.
	0228	Unit at 100% power.

March 13, 1984	1530	Unit 2 reactor trip due to low steam generator level caused by "A" main feed regulator valve failing shut.
	1803	Commenced reactor start-up.
	1840	Reactor critical.
	2036	Reactor trip on "C" S/G Lo-Lo level.
	2241	Commenced reactor start-up.
	2305	Reactor critical.
March 14, 1984	0057	Unit 2 on-line.
	0220	Unit at 30% power for chemistry hold.
March 17, 1984	0630	Commenced rampup to 100%.
	1115	Stabilized at 90% for Turbine Valve Freedom Test and calorimetric.
	1240	Turbine Valve Freedom Test complete.
	1241	Calorimetric complete.
	1249	Re-commencing rampup to 100%.
	1335	Unit at 100% power.
March 24, 1984	0015	Commenced rampdown to 845 MW for Turbine Valve Freedom Test.
	0130	Turbine Valve Freedom Test complete.
	0135	Commencing rampup to 100%.
March 30, 1984	2137	Commenced rampdown for Unit 2 Spring Maintenance Outage per System Operator at 150 MW per hour.
March 31, 1984	0252	Unit 2 off-line.
	2400	Ended this month with unit in Mode 5 for Spring Maintenance Outage. Expected date on-line is April 9, 1984.