

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

January 8, 1997

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

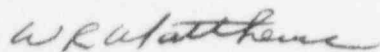
Serial No. 97-016
NAPS/JHL
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNIT NOS. 1 AND 2
MONTHLY OPERATING REPORT

Enclosed is the December 1996 Monthly Operating Report for North Anna Power Station Unit 1 and 2.

Very truly yours,



W. R. Matthews
Station Manager

Enclosure

cc: U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, N. W.
Suite 2900
Atlanta, Georgia 30323

Mr. R. D. McWhorter
NRC Senior Resident Inspector
North Anna Power Station

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PDR ADOCK 05000338
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160023

VIRGINIA POWER COMPANY
NORTH ANNA POWER STATION
MONTHLY OPERATING REPORT

MONTH: December YEAR: 1996

Approved:

W. R. Upatthorn
Station Manager

SRH

OPERATING DATA REPORT

DOCKET NO.: 50-338
 DATE: January 5, 1997
 CONTACT: W. R. Matthews
 PHONE: (540) 894-2101

OPERATING STATUS

1. Unit Name: North Anna 1
 2. Reporting Period: December 1996
 3. Licensed Thermal Power (MWt): 2,893
 4. Nameplate Rating (Gross MWe): 994
 5. Design Electrical Rating (Net MWe): 907
 6. Maximum Dependable Capacity (Gross MWe): 940
 7. Maximum Dependable Capacity (Net MWe): 893

8. If changes occur to Capacity Ratings (Items 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	Y-t-D	Cumulative
11. Hours in Reporting Period	744.0	8,784.0	162,420.0
12. Number of Hours Reactor Was Critical	744.0	8,030.8	125,217.2
13. Reactor Reserve Shutdown Hours	0.0	94.6	7,046.0
14. Hours Generator On-Line	744.0	7,986.3	122,173.8
15. Unit Reserve Shutdown Hours	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MMBtu)	2,151,824.5	22,266,799.5	327,580,536.6
17. Gross Electrical Energy Generated (MMBtu)	707,125.0	7,312,073.0	144,642,686.0
18. Net Electrical Energy Generated (MMBtu)	673,186.0	6,945,500.0	101,986,654.0
19. Unit Service Factor	100.0%	90.9%	75.2%
20. Unit Availability Factor	100.0%	90.9%	75.2%
21. Unit Capacity Factor (using MDC Net)	101.3%	88.5%	70.3%
22. Unit Capacity Factor (using DER Net)	99.8%	87.2%	69.2%
23. Forced Outage Rate	0.0%	0.9%	8.8%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, Duration of Each):

N/A

25. If Shutdown at end of Report Period, estimated time of Startup:

N/A

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: January 5, 1997
Contact: W. R. Matthews
Phone: (540) 894-2101

MONTH: December 1996

DAY AVERAGE DAILY POWER
LEVEL (MWe-Net)

1	904
2	904
3	904
4	905
5	905
6	905
7	905
8	905
9	904
10	905
11	904
12	905
13	905
14	905
15	906
16	905

DAY AVERAGE DAILY POWER
LEVEL (MWe-Net)

17	904
18	906
19	906
20	905
21	904
22	905
23	905
24	905
25	905
26	905
27	901
28	906
29	906
30	906
31	906

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.

NORTH ANNA POWER STATION

UNIT NO.: 1

MONTH: December

SUMMARY OF OPERATING EXPERIENCE

Page 1 of 1

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>
December 01, 1996	0000	Began month with unit at 100% power, 954 MWe.
December 27, 1996	0924	Commenced ramp down for Turbine Valve Freedom Test (TVFT).
	1005	Unit stable at 92% power, 875 MWe.
	1040	TVFT complete satisfactorily. Commenced ramp to 100% power.
	1130	Unit stable at 100% power, 950 MWe.
December 31, 1996	2400	Ended month with unit stable at 100% power, 951 MWe.

UNIT SHUTDOWN AND POWER REDUCTIONS
Explanation Sheet

Docket No.: 50-338

Report Month December Unit Name: NA-1

Year: 1996 Date: January 5, 1997

Contact: W. R. Matthews

* No entries this month.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: December 1996

DOCKET NO.: 50-338

UNIT NAME: NA-1

DATE: January 5, 1997

CONTACT: W. R. Matthews

PHONE: (540) 894-2101

No.	Date	1 Type	Duration (hrs)	2 Reason	3 Method of Shutting Down Reactor	Licensee Event Report #	4 System Code	5 Component Code	Cause & Corrective Action to Prevent Recurrence
* No entries this month.									

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

OPERATING DATA REPORT

DOCKET NO.: 50-339
 DATE: January 5, 1997
 CONTACT: W. R. Matthews
 PHONE: (540) 894-2101

OPERATING STATUS

1. Unit Name:..... North Anna 2
 2. Reporting Period:..... December 1996
 3. Licensed Thermal Power (MWt):..... 2,893
 4. Nameplate Rating (Gross MWe):..... 979
 5. Design Electrical Rating (Net MWe):..... 907
 6. Maximum Dependable Capacity (Gross MWe):..... 944
 7. Maximum Dependable Capacity (Net MWe):..... 897

8. If changes occur to Capacity Ratings (Items 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	Y-t-D	Cumulative
11. Hours in Reporting Period.....	744.0	8,784.0	140,688.0
12. Number of Hours Reactor was Critical.....	223.7	6,897.6	116,955.2
13. Reactor Reserve Shutdown Hours.....	80.2	627.2	7,162.2
14. Hours Generator On-Line.....	217.7	6,861.1	115,784.2
15. Unit Reserve Shutdown Hours.....	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MMBtu).....	653,728.4	19,604,679.3	315,581,918.0
17. Gross Electrical Energy Generated (MMBtu).....	213,952.0	6,437,817.0	103,269,235.0
18. Net Electrical Energy Generated (MMBtu).....	203,326.0	6,121,543.0	98,693,182.0
19. Unit Service Factor.....	29.3%	78.1%	82.3%
20. Unit Availability Factor.....	29.3%	78.1%	82.3%
21. Unit Capacity Factor (using MDC Net).....	30.5%	77.7%	78.0%
22. Unit Capacity Factor (using DER Net).....	30.1%	76.8%	77.3%
23. Forced Outage Rate.....	70.7%	13.5%	4.6%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, Duration of Each):

N/A

25. If Shutdown at end of Report Period, estimated time of Startup:

N/A

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: January 5, 1997
Contact: W. R. Matthews
Phone: (540) 894-2101

MONTH: December 1996

DAY AVERAGE DAILY POWER
LEVEL (MWe-Net)

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 (MWe-Net)

17	0
18	0
19	0
20	0
21	10
22	387
23	822
24	905
25	907
26	906
27	906
28	907
29	908
30	907
31	907

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.

NORTH ANNA POWER STATION

UNIT NO.: 2

MONTH: December

SUMMARY OF OPERATING EXPERIENCE

Page 1 of 3

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>
December 01, 1996	0000	Began month in Mode 5 for Main Generator repairs.
December 15, 1996	0333	Began heatup of RCS.
	0337	Entered Mode 4.
	1400	Found 2-RH-P-1B rotating backwards from discharge check valve not fully closed.
	1500	Suspended heatup at 300°F.
	1753	Began cooldown to Mode 5 for repairs.
	2235	Entered Mode 5.
	2325	Unit stable at 185°F, 320 psi.
December 19, 1996	0228	Commenced RCS heatup to 340° F.
	0235	Entered Mode 4.
December 20, 1996	1710	Secured RHR; continuing to heatup.
	1800	RCS temperature stable at 340° F.
	2244	Commence RCS pressurization.
December 21, 1996	0040	Entered Mode 3.
	0910	Shutdown Control Rod banks withdrawn.
	1403	Dilution for criticality complete.
	1527	Commenced Reactor startup.
	1545	Entered Mode 2.

NORTH ANNA POWER STATION

UNIT NO.: 2
MONTH: December

SUMMARY OF OPERATING EXPERIENCE

Page 2 of 3

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>
December 21, 1996	1618	Reactor critical.
	1743	Entered Mode 1.
	2224	Unit placed on-line.
	2325	Unit stabilized at 30% power, 240 MWe.
December 22, 1996	0133	Entered action for secondary sulfates high on all three Steam Generators.
	0921	Cleared chemistry hold.
	1030	Commenced ramp to full power.
	1123	Stopped ramp at 48% power, 388 MWe for calibration of N43 detector.
	1505	Commenced ramp.
	1610	Holding ramp at 66% power, 613 MWe for Main Generator Differential Gas Temperature alarm.
	1645	Commenced ramp after investigating alarm.
	1719	Holding ramp at 76% power, 735 MWe due to oscillations on #1 Governor valve.
	2000	#1 Governor failed closed. Lost approximately 30 MWe.
	2028	Isolated EHC to #1 Governor. Unit stable at 72% power, 706 MWe.
December 23, 1996	0450	#1 Governor valve returned to program. Increased power to 80%, 756 MWe to observe valve operation.
	0740	Commenced ramping unit to 100% after observing #1 Governor valve.

NORTH ANNA POWER STATION

UNIT NO.: 2

MONTH: December

SUMMARY OF OPERATING EXPERIENCE

Page 3 of 3

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>
December 23, 1996	0825	Reactor stable at 87% power for calorimetric.
	0839	Recommended ramp to 96% power.
	0859	Hold unit ramp at 95% power for adjusting Nuclear Instrumentation.
	1114	Recommended ramp to 100% power.
	1214	Unit stable at 100% power, 948 MWe.
December 31, 1996	2400	Ended month in Mode 1 at 100% power, 952 MWe.

UNIT SHUTDOWN AND POWER REDUCTIONS
Explanation SheetDocket No.: 50-339Report Month December Unit Name: NA-2Year: 1996 Date: January 5, 1997Contact: W. R. Matthews

96-03

November 12, 1996 0853 hours
Automatic reactor trip due to Main Generator
Differential Lock Out Relay actuation.

December 15, 1996 0337 hours
Entered Mode 4.

December 15, 1996 1753 hours
Commenced cooldown to Mode 5 due to "B" RHR pump
rotating backwards from discharge check valve not fully
closed.

December 19, 1996 0235 hours
Entered Mode 4.

December 21, 1996 0040 hours
Entered Mode 3.

December 21, 1996 1545 hours
Entered Mode 2.

December 21, 1996 1618 hours
Reactor critical.

December 21, 1996 1743 hours
Entered Mode 1.

December 21, 1996 2224 hours
Unit placed on-line.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH:December 1996

DOCKET NO.: 50-339

UNIT NAME: NA-2

DATE:January 5, 1997

CONTACT: W. R. Matthews

PHONE: (540) 894-2101

No.	Date	1 Type	Duration (hrs)	2 Reason	3 Method of Shutting Down Reactor	Licensee Event Report #	4 System Code	5 Component Code	Cause & Corrective Action to Prevent Recurrence
96- 3	961112	F	526.35	A	3	2-96-003	TB	TG	Main Generator "A" Phase Fault Caused by Foreign Material Blocking Cooling Flow

1: Type

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
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