

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

November 13, 1996

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

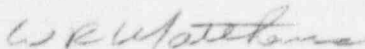
Serial No. 96-582
NAPS/JHL
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

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

Enclosed is the October 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

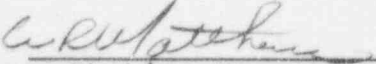
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VIRGINIA POWER COMPANY
NORTH ANNA POWER STATION
MONTHLY OPERATING REPORT

MONTH: October YEAR: 1996

Approved:


Station Manager

JRH

OPERATING DATA REPORT

DOCKET NO.: 50-338
DATE: November 5, 1996
CONTACT: W. R. Matthews
PHONE: (540) 894-2101

OPERATING STATUS

1. Unit Name:..... North Anna 1
2. Reporting Period:..... October 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.....	745.0	7,320.0	160,956.0
12. Number of Hours Reactor was Critical.....	724.4	6,566.8	123,753.2
13. Reactor Reserve Shutdown Hours.....	20.2	94.6	7,046.0
14. Hours Generator On-Line.....	716.3	6,522.3	120,709.8
15. Unit Reserve Shutdown Hours.....	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MMH).....	2,045,761.6	18,032,368.1	323,346,105.2
17. Gross Electrical Energy Generated (MMH).....	671,974.0	5,919,802.0	143,250,415.0
18. Net Electrical Energy Generated (MMH).....	638,808.0	5,620,608.0	100,661,762.0
19. Unit Service Factor.....	96.1%	89.1%	75.0%
20. Unit Availability Factor.....	96.1%	89.1%	75.0%
21. Unit Capacity Factor (using MDC Net).....	96.0%	86.0%	70.0%
22. Unit Capacity Factor (using DER Net).....	94.5%	84.7%	69.0%
23. Forced Outage Rate.....	3.9%	1.1%	8.9%

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: November 5, 1996
Contact: W. R. Matthews
Phone: (540) 894-2101

MONTH: October 1996

DAY AVERAGE DAILY POWER
LEVEL (MWe-Net)

1	905
2	905
3	903
4	902
5	903
6	904
7	905
8	906
9	906
10	905
11	905
12	906
13	906
14	904
15	905
16	904

DAY AVERAGE DAILY POWER
LEVEL (MWe-Net)

17	903
18	903
19	904
20	905
21	905
22	907
23	907
24	126
25	205
26	902
27	909
28	908
29	907
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.: 1
MONTH: October

SUMMARY OF OPERATING EXPERIENCE

Page 1 of 2

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>
October 01, 1996	0000	Began month with unit at 100% power, 951 MWe.
October 04, 1996	1026	Commenced ramp down from 100% power, 950 MWe for Turbine Valve Freedom Test (TVFT)
	1109	Unit stable at 92% power, 880 MWe.
October 24, 1996	0319	Unit trip due to Main Generator negative phase sequence relay actuation.
	1832	Completed pulling shutdown control rod banks for startup.
	2331	Entered Mode 2.
	2353	Reactor critical.
October 25, 1996	0005	Unit at point of adding heat (POAH).
	0038	Entered Mode 1.
	0803	Unit placed on line and began ramp to 30% power.
	0933	Unit stable at 30% power for Secondary Chemistry hold on sulfates.
	1645	Cleared chemistry hold. Commenced ramp at 0.3% power minute.
	1751	Stabilized power at 45%, 415 MWe for "A" Main Feedwater pump oil shield rubbing.
	2103	Commenced ramp from 47% power, 422 MWe after swapping to "B" Main Feedwater pump.
October 26, 1996	0029	Stopped ramp at 90% power, 857 MWe for calorimetric.
	0040	Commenced ramp to 100% power.
	0203	Unit stable at 100% power, 954 MWe.

NORTH ANNA POWER STATION

UNIT NO.: 1
MONTH: October

SUMMARY OF OPERATING EXPERIENCE

Page 2 of 2

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>
October 31, 1996	2400	Ended month with unit stable at 100% power, 952 MWe.

UNIT SHUTDOWN AND POWER REDUCTIONS
Explanation Sheet

Docket No.: 50-338

Report Month October Unit Name: NA-1

Year: 1996 Date: November 5, 1996

Contact: W. R. Matthews

96-03

October 24, 1996

Automatic reactor trip due to Main Generator negative phase sequence relay actuation.

Corrective maintenance complete and unit entered Mode 2 at 2331 hours.

October 25, 1996

Unit entered Mode 1 at 0038 hours and placed on line at 0803 hours.

October 26, 1996

Unit stable at 100% power, 954 MWe.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: October 1996

DOCKET NO.: 50-338

UNIT NAME: NA-1

DATE: November 5, 1996

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
96-0	961024	F	28.7	A	3	1-96-010	EL	46	Reactor trip due to main generator negative phase sequence relay actuation. Relay was tested and replaced.

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

OPERATING DATA REPORT

DOCKET NO.: 50-339
 DATE: November 5, 1996
 CONTACT: W. R. Matthews
 PHONE: (540) 894-2101

OPERATING STATUS

1. Unit Name:..... North Anna 2
 2. Reporting Period:..... October 1996
 3. Licensed Thermal Power (MWe):..... 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.....	745.0	7,320.0	139,224.0
12. Number of Hours Reactor was Critical.....	376.2	6,401.0	116,458.6
13. Reactor Reserve Shutdown Hours.....	117.9	135.4	6,670.4
14. Hours Generator On-Line.....	346.7	6,370.5	115,293.6
15. Unit Reserve Shutdown Hours.....	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH).....	881,968.7	18,161,971.9	314,139,210.6
17. Gross Electrical Energy Generated (MWH).....	288,086.0	5,964,209.0	102,795,627.0
18. Net Electrical Energy Generated (MWH).....	272,465.0	5,671,304.0	98,242,943.0
19. Unit Service Factor.....	46.5%	87.0%	82.8%
20. Unit Availability Factor.....	46.5%	87.0%	82.8%
21. Unit Capacity Factor (using MDC Net).....	40.8%	86.4%	78.5%
22. Unit Capacity Factor (using DER Net).....	40.3%	85.4%	77.8%
23. Forced Outage Rate.....	21.7%	1.5%	4.6%

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

 25. If Shutdown at end of Report Period, estimated time 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: November 5, 1996
Contact: W. R. Matthews
Phone: (540) 894-2101

MONTH: October 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	86
14	376
15	657
16	875

DAY AVERAGE DAILY POWER
LEVEL (MWe-Net)

17	904
18	904
19	904
20	904
21	583
22	0
23	0
24	0
25	38
26	550
27	907
28	907
29	907
30	907
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.: 2
MONTH: October

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>
October 01, 1996	0000	Began month in Mode 5 for scheduled refueling outage.
October 03, 1996	1825	Established steam bubble in pressurizer.
October 06, 1996	0316	Commenced heatup to Mode 4.
	0345	Entered Mode 4.
	0951	Entered Mode 3.
	1553	Received "C" Reactor Coolant Pump seal leakage alarm at 1660 psi and 470 degrees. Suspended heatup and pressurization.
	1716	Commenced cooldown to Mode 5 to repair "C" Reactor Coolant Pump.
	2035	Entered Mode 4.
October 7, 1996	0056	Entered Mode 5.
October 11, 1996	1230	Commenced Reactor Coolant System heatup.
	1249	Entered Mode 4.
	1755	Entered Mode 3.
October 12, 1996	0322	Unit stable at 547°F.
	0656	Completed withdrawal of shutdown control rod banks.
	1445	Entered Mode 2.
	1524	Reactor critical.
October 13, 1996	0654	Reactor physics testing complete.

NORTH ANNA POWER STATION

UNIT NO.: 2

MONTH: October

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>
October 13, 1996	0905	Entered Mode 1.
	1313	Unit placed on-line. Refueling Outage duration of 35 days, 12 hours and 24 minutes.
	1445	Unit stable at 30% power, 248 MWe for secondary chemistry and testing.
October 14, 1996	0741	Cleared chemistry hold and commenced ramp.
October 16, 1996	0928	Unit stable at 100% power, 951 MWe.
October 21, 1996	1314	Commenced unit ramp from 100% power, 950 MWe at 0.3% power per minute due to steam leak on High Pressure Turbine balance line.
	1805	Unit off-line.
	1913	Entered Mode 2.
	1923	Entered Mode 3.
October 25, 1996	1055	Commenced Reactor startup.
	1103	Entered Mode 2.
	1135	Reactor critical.
	1315	Entered Mode 1.
	1812	Unit placed on line.
	1938	Commenced ramp to 30% power.
	2000	Secured ramp at 30% power, 216 MWe for calorimetric and Secondary Chemistry hold on sulfates.

NORTH ANNA POWER STATION

UNIT NO.: 2
MONTH: October

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>
October 26, 1996	0545	Commenced ramp from 30% power, 245 MWe after clearing chemistry hold.
	0950	Holding ramp at 70% power, 643 MWe for calorimetric.
	1002	Recommenced ramp after calorimetric.
	1045	Holding ramp at 79% power, 756 MWe until "A" Main Condenser waterbox is returned to service.
	2009	Recommenced ramp from 79% power.
	2046	Holding power at 90%, 860 MWe for calorimetric.
	2130	Recommenced ramp after calorimetric.
	2218	Holding power at 98.7%, 936 MWe for instrumentation adjustments.
	2253	Recommenced ramp.
	2312	Unit stable at 100% power, 944 MWe.
October 31, 1996	2400	Ended month at 100% power, 951 MWe.

UNIT SHUTDOWN AND POWER REDUCTIONS
Explanation Sheet

Docket No.: 50-339

Report Month October Unit Name: NA-2

Year: 1996 Date: November 5, 1996

Contact: W. R. Matthews

96-01

September 8, 1996

Unit manually taken off-line at 0049 hours and shutdown for normally scheduled refueling outage.

October 12, 1996

Outage activities complete. Unit entered Mode 2 at 1445 hours.

October 13, 1996

Unit entered Mode 1 at 0905 hours. Unit placed on line at 1313 hours.

October 16, 1996

Unit stable at 100% power, 951 MWe.

96-02

October 21, 1996

Unit manually ramped from 100% power to hot standby due to steam leak on High Pressure Turbine balance line.

October 25, 1996

Corrective maintenance complete. Unit entered Mode 2 at 1103 hours, Mode 1 at 1315 hours and placed on line at 1812 hours.

October 26, 1996

Unit stable at 100% power, 944 MWe.

UNIT SHUTDOWNS AND POWER REDUCTIONS

REPORT MONTH: October 1996

DOCKET NO.: 50-339
UNIT NAME: NA-2
DATE: November 5, 1996
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
96-0	960908	S	301.22	C	1	N/A	N/A	N/A	N/A
96-0	961021	F	96.1	A	1	N/A	N/A	N/A	Steam leak on High Pressure Turbine balance line.

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
Even. Report (LER) File
(NUREG-0161)
5:
Exhibit H - Same Source