

VIRGINIA POWER COMPANY  
NORTH ANNA POWER STATION  
MONTHLY OPERATING REPORT

MONTH: July YEAR: 1991

Approved:

  
① Station Manager

9108210074 910814  
PDR ADDCK 05000338  
R PDR

# OPERATING DATA REPORT

DOCKET NO.: 50-338  
 DATE: August 1, 1991  
 COMPLETED BY: C. Mladen

## OPERATING STATUS

1. Unit Name:.....North Anna 1
2. Reporting Period:.....July 1991
3. Licensed Thermal Power (MWt):..... 2,893
4. Nameplate Rating (Gross MWe):..... 947
5. Design Electrical Rating (Net MWe):..... 907
6. Maximum Dependable Capacity (Gross MWe):.. 959
7. Maximum Dependable Capacity (Net MWe):.... 911

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	Y-t-D	Cumulative
11. Hours in Reporting Period.....	744.0	5,087.0	114,899.0
12. Number of Hours Reactor was Critical.....	438.5	3,241.1	83,232.0
13. Reactor Reserve Shutdown Hours.....	44.3	86.3	6,689.9
14. Hours Generator On-Line.....	434.6	3,099.0	80,319.0
15. Unit Reserve Shutdown Hours.....	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH).....	1,141,323.2	8,043,245.0	213,029,481.0
17. Gross Electrical Energy Generated (MWH).....	373,905.0	2,643,868.0	69,985,206.0
18. Net Electrical Energy Generated (MWH).....	354,424.0	2,507,003.0	66,235,755.0
19. Unit Service Factor.....	58.4%	60.9%	69.9%
20. Unit Availability Factor.....	58.4%	60.9%	69.9%
21. Unit Capacity Factor (using MDC Net).....	52.3%	54.1%	64.4%
22. Unit Capacity Factor (using DER Net).....	52.5%	54.3%	63.6%
23. Forced Outage Rate.....	41.6%	17.1%	12.7%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each): \_\_\_\_\_ None \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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: August 1, 1991  
 Completed by: C. Mladen  
 Phone: (703) 894-2774

MONTH: July 1991

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
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1	<u>906</u>
2	<u>906</u>
3	<u>905</u>
4	<u>905</u>
5	<u>223</u>
6	<u>0</u>
7	<u>0</u>
8	<u>0</u>
9	<u>0</u>
10	<u>0</u>
11	<u>0</u>
12	<u>0</u>
13	<u>0</u>
14	<u>0</u>
15	<u>0</u>
16	<u>0</u>

DAY	AVERAGE DAILY LEVEL LEVEL (MWe-Net)
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17	<u>0</u>
18	<u>136</u>
19	<u>203</u>
20	<u>617</u>
21	<u>904</u>
22	<u>902</u>
23	<u>904</u>
24	<u>904</u>
25	<u>906</u>
26	<u>905</u>
27	<u>906</u>
28	<u>908</u>
29	<u>909</u>
30	<u>910</u>
31	<u>909</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

REPORT MONTH: July 1991

DOCKET NO.: 50-338  
UNIT NAME: NA-1  
DATE: August 1, 1991  
COMPLETED BY: C. Mladen  
PHONE: (703) 894-2774

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
91-05	910705	F	309.4	B	1	N/A	SG	COND	Corrective maintenance on Main condenser

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

UNIT SHUTDOWN AND POWER REDUCTIONS  
Explanation Sheet

Docket No.: 50-338

Report Month July Unit Name: NA-1

Year: 1991 Date: August 1, 1991

Completed by: Cathie Mladen

#91-05

July 5, 1991

Commenced unit ramp-down to 25% at 0406 hours due to elevated Main condenser air inleakage. Main generator taken off-line at 0930 hours for corrective repairs to the Main condenser. Unit entered Mode 2 at 0938 hours. Unit entered Mode 3 at 0948 hours. Unit entered Mode 4 at 1933 hours.

July 6, 1991

Unit entered Mode 5 at 1201 hours.

July 17, 1991

Unit entered Mode 4 at 0912 hours. Unit entered Mode 3 at 1518 hours.

July 18, 1991

Unit entered Mode 2 at 0319 hours. Unit entered Mode 1 at 0625 hours. Main generator placed on-line at 0653 hours. Unit stable at 30% for Chemistry hold at 1130 hours.

July 20, 1991

Cleared 30% power Chemistry hold at 0240 hours and commenced unit ramp-up. Unit stable at 56% power for change-out of the "C" main condensate pump strainer at 0530 hours. Commenced unit ramp-up to 100% at 0912 hours. Unit stable at 90% power at 1430 hours for calorimetric procedure. Commenced unit ramp-up to 100% at 1526 hours. Unit stable at 97% power with all turbine valves full open at 1623 hours.

July 22, 1991

Unit stable at 99.5% power at 0945 hours after performing procedure to bypass a portion of feedwater to first point heaters.

# NORTH ANNA POWER STATION

UNIT NO.: 1  
MONTH: July

Page 1 of 2

## 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>
July 01, 1991	0000	Began month with unit at 100%, 954MWe.
July 05, 1991	0406	Commenced unit ramp-down to 25% power due to elevated Main condenser air inleakage.
	0633	Unit stable at 25%.
	0802	Commenced unit ramp-down to 22% power due to decreasing Main condenser vacuum.
	0811	Unit stable at 23% power.
	0905	Commenced unit shut-down due to decreasing Main condenser vacuum.
	0930	Main generator off-line.
	0936	Main turbine manually tripped.
	0938	Unit entered Mode 2.
	0948	Unit entered Mode 3.
	1933	Unit entered Mode 4.
July 06, 1991	1201	Unit entered Mode 5.
July 17, 1991	0912	Unit entered Mode 4.
	1518	Unit entered Mode 3.
July 18, 1991	0319	Unit entered Mode 2.
	0625	Unit entered Mode 1.
	0653	Main generator on-line, commencing unit ramp-up.
	1130	Unit stable at approximately 30% for Chemistry hold.

# NORTH ANNA POWER STATION

UNIT NO.: 1  
MONTH: July

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## SUMMARY OF OPERATING EXPERIENCE

July 20, 1991	0240	Cleared 30% chemistry hold. Commenced unit ramp-up.
	0530	Unit stable at 56% for change-out of "C" Main condensate pump strainer.
	0912	Commenced unit ramp-up to 100%.
	1430	Unit stable at 90% for calorimetric procedure.
	1526	Calorimetric satisfactorily completed. Commencing unit ramp-up to 100%.
	1623	Unit stable at 97% with all turbine governor valves full open.
July 22, 1991	0945	Reactor power at 99.5% due to performance of 1-TOP-31.3 which bypasses a portion of feedwater to the 1st point heaters.
July 31, 1991	2400	Ended month with unit at 100%, 959MWe.



# OPERATING DATA REPORT

DOCKET NO.: 50-339  
 DATE: August 1, 1991  
 COMPLETED BY: C. Mladen  
 PHONE: (703) 894-2774

## OPERATING STATUS

1. Unit Name:.....North Anna 2
2. Reporting Period:.....July 1991
3. Licensed Thermal Power (MWt):.....2893
4. Nameplate Rating (Gross MWe):.....947
5. Design Electrical Rating (Net MWe):.....907
6. Maximum Dependable Capacity (Gross MWe):..957
7. Maximum Dependable Capacity (Net MWe):....909

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	Y-t-D	Cumulative
11. Hours in Reporting Period.....	744.0	5,087.0	93,167.0
12. Number of Hours Reactor was Critical.....	744.0	5,087.0	76,221.3
13. Reactor Reserve Shutdown Hours.....	0.0	0.0	5,949.6
14. Hours Generator On-Line.....	744.0	5,087.0	75,321.3
15. Unit Reserve Shutdown Hours.....	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH).....	2,151,780.9	14,708,949.2	201,958,062.6
17. Gross Electrical Energy Generated (MWH).....	702,472.0	4,857,161.0	66,159,747.0
18. Net Electrical Energy Generated (MWH).....	667,396.0	4,622,718.0	63,438,198.0
19. Unit Service Factor.....	100.0%	100.0%	80.8%
20. Unit Availability Factor.....	100.0%	100.0%	80.8%
21. Unit Capacity Factor (using MDC Net).....	98.7%	100.0%	75.7%
22. Unit Capacity Factor (using DER Net).....	98.9%	100.2%	75.1%
23. Forced Outage Rate.....	0.0%	0.0%	5.9%

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

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: August 1, 1991  
 Completed by: C. Mladen  
 Phone: (703) 894-2774

MONTH: July 1991

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY LEVEL LEVEL (MWe-Net)
1	<u>900</u>	17	<u>898</u>
2	<u>900</u>	18	<u>898</u>
3	<u>899</u>	19	<u>896</u>
4	<u>899</u>	20	<u>897</u>
5	<u>897</u>	21	<u>896</u>
6	<u>898</u>	22	<u>895</u>
7	<u>899</u>	23	<u>895</u>
8	<u>899</u>	24	<u>894</u>
9	<u>898</u>	25	<u>893</u>
10	<u>900</u>	26	<u>893</u>
11	<u>893</u>	27	<u>894</u>
12	<u>899</u>	28	<u>896</u>
13	<u>899</u>	29	<u>897</u>
14	<u>898</u>	30	<u>897</u>
15	<u>898</u>	31	<u>898</u>
16	<u>897</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.

DOCKET NO.: 50-339  
 UNIT NAME: NA-2  
 DATE: August 1, 1991  
 COMPLETED BY: C. Mladen  
 PHONE: (703) 894-2774

REPORT MONTH: July 1991

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

1: Type	2: Reason	3: Method	4:	5:
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			
	H=Other (explain)			
				Exhibit H - Same Source

UNIT SHUTDOWN AND POWER REDUCTIONS  
Explanation Sheet

Docket No.: 50-339

Report Month July Unit Name: NA-2

Year: 1991 Date: August 1, 1991

Completed by: Cathie Mladen

\*No entry this month

# NORTH ANNA POWER STATION

UNIT NO.: 2  
MONTH: July

## 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>
July 01, 1991	0000	Began month with unit at 100%, 943MWe.
July 11, 1991	0750	Commenced unit ramp-down to 880MWe for TVFT.
	0820	Unit stable at 880MWe.
	1000	TVFT completed satisfactorily. Commenced unit ramp-up.
	1045	Unit stable at 100%.
July 31, 1991	2400	Ended month with unit at 100%, 948MWe.