

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION

MONTHLY OPERATING REPORT

MONTH SEPTEMBER YEAR 1981

APPROVED:

  
STATION MANAGER

8201150291 811015  
PDR ADOCK 05000338  
R PDR

OPERATING DATA REPORT

DOCKET NO. 50-338  
 DATE 10-05-81  
 COMPLETED BY L.L. Rogers  
 TELEPHONE (703) 894-5151 X2510

OPERATING STATUS

Notes

1. Unit Name: North Anna 1
2. Reporting Period: September 1981
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): 915
7. Maximum Dependable Capacity (Net MWe): 865
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	720	6,551	29,112
12. Number of Hours Reactor Was Critical	720	4,243.8	22,216.9
13. Reactor Reserve Shutdown Hours	0	13.8	226.9
14. Hours Generator On-Line	720	4,124.8	21,772.9
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,929,551	10,897,224	56,065,927
17. Gross Electrical Energy Generated (MWH)	620,516	3,540,720	17,875,632
18. Net Electrical Energy Generated (MWH)	586,022	3,341,231	16,826,234
19. Unit Service Factor	100	62.9	74.8
20. Unit Availability Factor	100	62.9	74.8
21. Unit Capacity Factor (Using MDC Net)	94.1	58.9	66.8
22. Unit Capacity Factor (Using DER Net)	89.7	56.2	63.7
23. Unit Forced Outage Rate	0	1.3	5.1
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

Fall Maintenance - 10-05-81 thru 10-23-81

25. If Shut Down At End Of Report Period, Estimated Date 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 10-05-81

COMPLETED BY L.L. Rogers

TELEPHONE 703-894-5151X2510

MONTH September

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>840</u>	17	<u>843</u>
2	<u>843</u>	18	<u>839</u>
3	<u>841</u>	19	<u>835</u>
4	<u>839</u>	20	<u>841</u>
5	<u>841</u>	21	<u>845</u>
6	<u>838</u>	22	<u>844</u>
7	<u>842</u>	23	<u>846</u>
8	<u>706</u>	24	<u>846</u>
9	<u>592</u>	25	<u>780</u>
10	<u>717</u>	26	<u>562</u>
11	<u>841</u>	27	<u>821</u>
12	<u>845</u>	28	<u>851</u>
13	<u>843</u>	29	<u>852</u>
14	<u>844</u>	30	<u>852</u>
15	<u>842</u>	31	<u></u>
16	<u>844</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. 50-338  
 UNIT NAME North Anna 1  
 DATE 10-05-81  
 COMPLETED BY L. L. ROGERS  
 TELEPHONE (703) 894-5151 X2510

REPORT MONTH SEPTEMBER

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
81-14	810908	F	N/A	D	5	LER-81-73	SF	ACCUMU	Reduced load to 30% due to "B" accumulator out of specification.
81-15	810925	S	N/A	B	5	N/A	N/A	N/A	Reduced load to 30% for containment entry to improve "B" RCP ventilation.

1	2	3	4
F: Forced S: Scheduled	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)	Method: 1-Manual 2-Manual Scram. 3-Automatic Scram 4-Continuations 5-Load Reduction 9-Other	Exhibit F - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)  5 Exhibit 4 - Same Source

OPERATING DATA REPORT

DOCKET NO. 50-339  
 DATE 10-05-81  
 COMPLETED BY L.L. Rogers  
 TELEPHONE (703) 894-1511 X2510

OPERATING STATUS

Notes

1. Unit Name: North Anna 2
2. Reporting Period: September 1981
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): 938
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	720	6,551	6,983
12. Number of Hours Reactor Was Critical	670.2	4,791.1	5,220
13. Reactor Reserve Shutdown Hours	0	1,341.4	1,621.4
14. Hours Generator On-Line	666.1	4,649.1	5,061.8
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,802,899	11,904,002	12,990,999
17. Gross Electrical Energy Generated (MWH)	608,189	4,009,928	4,378,359
18. Net Electrical Energy Generated (MWH)	576,864	3,791,660	4,141,304
19. Unit Service Factor	92.5	70.9	72.5
20. Unit Availability Factor	92.5	70.9	72.5
21. Unit Capacity Factor (Using MDC Net)	90.0	65.0	66.6
22. Unit Capacity Factor (Using DER Net)	88.3	53.8	65.4
23. Unit Forced Outage Rate	7.5	25.6	24.2
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

Refueling Outage - 03-05-82 thru 05-14-82

25. If Shut Down At End Of Report Period, Estimated Date 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 10-05-81

COMPLETED BY L.L. Rogers

TELEPHONE 703-894-5151X2510

MONTH September

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	884	17	731
2	887	18	0
3	885	19	0
4	884	20	579
5	868	21	881
6	885	22	860
7	887	23	874
8	874	24	877
9	874	25	880
10	882	26	875
11	876	27	863
12	882	28	868
13	856	29	882
14	855	30	886
15	833	31	
16	866		

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	10-05-81
COMPLETED BY	L. L. ROGERS
TELEPHONE	(703) 894-5151 X2510

REPORT MONTH SEPTEMBER

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
81-25	810903	F	N/A	F	5	N/A	N/A	N/A	Reduced load to 95% due to "B" Transformer hi temperature alarm.
81-26	810908	S	N/A	B	5	N/A	N/A	N/A	Ramped down to 80% for Westinghouse to investigate turbine bearing vibration problem.
81-27	810911	F	N/A	F	5	N/A	N/A	N/A	Reduced load to 93% due to "B" Transformer hi temperature alarm.
81-28	810912	F	N/A	F	5	N/A	N/A	N/A	Reduced load to 95% due to "B" Transformer hi temperature alarm.
81-29	810913	F	N/A	F	5	N/A	N/A	N/A	Reduced load to 94% due to "B" Transformer hi temperature alarm.

1	2
F: Forced	Reason:
S: Scheduled	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 SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO.	50-339
UNIT NAME	North Anna 2
DATE	10-05-81
COMPLETED BY	L. L. ROGERS
TELEPHONE	(703) 894-5151 X2510

REPORT MONTH SEPTEMBER

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
81-30	810914	F	N/A	F	5	N/A	N/A	N/A	Reduced load to 88% due to "B" Transformer hi temperature alarm.
81-31	810914	F	N/A	F	5	N/A	N/A	N/A	Reduced load to 89% due to "B" Transformer hi temperature alarm.
81-32	810915	F	N/A	F	5	N/A	N/A	N/A	Reduced load to 90% due to "B" Transformer hi temperature alarm.
81-33	810917	F	N/A	H	5	N/A	N/A	N/A	Reduced load per System Operator for load following to 85%.

<sup>1</sup>  
F: Forced  
S: Scheduled

<sup>2</sup>  
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)

<sup>3</sup>  
Method:  
1-Manual  
2-Manual Scram.  
3-Automatic Scram  
4-Continuations  
5-Load Reduction  
9-Other

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

<sup>5</sup>  
Exhibit H - Same Source



## UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO.	50-339
UNIT NAME	North Anna 2
DATE	10-05-81
COMPLETED BY	L. L. ROGERS
TELEPHONE	(703) 894-5151 X2510

REPORT MONTH SEPTEMBER

No.	Date	Type <sup>1</sup>	Duration (Hours)	Reason <sup>2</sup>	Method of Shutting Down Reactor <sup>3</sup>	Licensee Event Report #	System Code <sup>4</sup>	Component Code <sup>5</sup>	Cause & Corrective Action to Prevent Recurrence
81-34	810917	F	53.9	A	2	LER-81-66	SF	ACCUMU	Ramped unit off line due to "C" accumulator out of specification. Reactor trip due to "B" steam generator hi/hi level while attempting to return unit to service.
81-35	810922	F	N/A	F	5	N/A	N/A	N/A	Reduced load to 93% due to "B" Transformer hi temperature alarm.
81-36	810927	F	N/A	F	5	N/A	N/A	N/A	Reduced load to 92% due to "B" Transformer hi temperature alarm.

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)		5
	H-Other (Explain)		Exhibit H - Same Source

UNIT SHUTDOWN AND POWER REDUCTIONS

EXPLANATION SHEET      DOCKET NO. 50-339

REPORT MONTH SEPTEMBER      UNIT NAME NA-2

YEAR 1981      DATE 10-05-81

COMPLETED BY L. L. ROGERS

- 81-33    (H)    (5)      Reduced load per System Operator to accommodate system load demand.
- 81-34    (A)    (2)      Ramped unit off line due to "C" accumulator out of specification, > 2100 ppm boron. Reactor trip due to "B" steam generator hi/hi level due to excessive leakage through the "B" main feedwater reg valve.