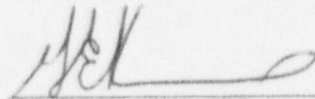


VIRGINIA POWER COMPANY
NORTH ANNA POWER STATION
MONTHLY OPERATING REPORT

MONTH July YEAR 1987

APPROVED:


STATION MANAGER

for

8708170350 870817
PDR ADOCK 05000338
R PDR

1024
1/1

OPERATING DATA REPORT

DOCKET NO. 50-338
 DATE 08-03-87
 COMPLETED BY Brenda Garner
 TELEPHONE (703) 894-5151 X2527

OPERATING STATUS

1. Unit Name: North Anna 1
2. Reporting Period: July, 1987
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): 963
7. Maximum Dependable Capacity (Net MWe): 915
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	5,087	79,805
12. Number of Hours Reactor Was Critical	258.3	2,905.5	56,520
13. Reactor Reserve Shutdown Hours	84.4	110	6,215.4
14. Hours Generator On-Line	248	2,872.9	54,099.6
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	386,095	7,796,294	142,582,058
17. Gross Electrical Energy Generated (MWH)	122,445	2,607,075	46,735,295
18. Net Electrical Energy Generated (MWH)	112,295	2,472,851	44,198,538
19. Unit Service Factor	33.3	56.5	67.8
20. Unit Availability Factor	33.3	56.5	67.8
21. Unit Capacity Factor (Using MDC Net)	16.5	53.1	62.4
22. Unit Capacity Factor (Using DFR Net)	16.6	53.6	61.0
23. Unit Forced Outage Rate	61.8	12.5	12.8
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

25. If Shut Down At End Of Report Period, Estimated Date of Startup: Sept. 25, 1987
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 08-03-87
COMPLETED BY Brenda Garner
TELEPHONE 703-894-5151X2527

MONTH July, 1987

DAY	AVERAGE DAILY POWER LEVEL (iWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>173</u>	17	<u>0</u>
2	<u>20</u>	18	<u>0</u>
3	<u>0</u>	19	<u>0</u>
4	<u>16</u>	20	<u>0</u>
5	<u>213</u>	21	<u>0</u>
6	<u>416</u>	22	<u>0</u>
7	<u>460</u>	23	<u>0</u>
8	<u>397</u>	24	<u>0</u>
9	<u>393</u>	25	<u>0</u>
10	<u>365</u>	26	<u>0</u>
11	<u>0</u>	27	<u>0</u>
12	<u>278</u>	28	<u>0</u>
13	<u>795</u>	29	<u>0</u>
14	<u>903</u>	30	<u>0</u>
15	<u>250</u>	31	<u>0</u>
16	<u>0</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 July UNIT NAME NA-1

YEAR 1987 DATE 08-03-87

COMPLETED BY Brenda Garner

- 87-03 (1) Commenced rampdown to 0% power to repair 1-FW-110 broken stem on 'C' Main Feed Regulator manual isolation valve. July 2, 1987 at 0326, Unit came off line. Repairs were completed and on July 4, 1987 at 2123, Unit returned on line.

- 87-04 (2) Commenced rampdown to 0% power to repair stop valve on 'B' Moisture Separate Reheater (M.S.R.). July 10, 1987 at 2320, Unit came off line. Repairs were completed and on July 12, 1987 at 0356, Unit returned on line.

- 87-05 (3) July 15, 1987 at 0636, Reactor trip occurred at 100% power, due to 'C' Steam Generator tube rupture. Ended the month with Unit in Mode 5, due to tube inspections on Steam Generators.

DOCKET NO.	50-338
UNIT NAME	North Anna 1
DATE	08-03-87
COMPLETED BY	Brenda Garner
TELEPHONE	(703) 894-5151 X2527

REPORT MONTH July, 1987

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	License Event Report #	System Code	Component Code	Cause & Corrective Action to Prevent Recurrence
87-03	870702	S	66	A	1	N/A	N/A	N/A	Commenced rampdown to 0% power to repair 1-FW-110 broken stem on 'C' Main Feed Regulator manual isolation valve. Repairs were completed and Unit returned to 80% power.
87-04	870710	S	28.6	H	1	LER N1-87-16	SB	ISV	Commenced rampdown to 0% power to repair stop valve 'B' M.S.R. Repairs were completed and Unit returned to 100% power.
87-05	870715	F	401.4	A	2	LER N1-87-17	AB	SG	Manual Reactor trip occurred at 100% power due to 'C' Steam Generator tube rupture. Ended this month with Unit in Mode 5
1	F: Forced S: Scheduled	2	Reason:	3	Method:	4	Exhibit F - Instructions for Preparation of Data Entry Sheets for Licensee Event Report (LER) File (NUREG-0161)	5	Exhibit H - Same Source
			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)						

VIRGINIA POWER
NORTH ANNA POWER STATION

UNIT NO. 1

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 1, 1987	0000	Began the month with Unit at 200 MW - 24% power, adjusting secondary chemistry.
July 2, 1987	0205	Commenced rampdown to 0% power, due to 1-FW-110 broken stem on "C" Main Feed Regulator manual isolation valve.
	0326	Unit off line.
	0450	Reactor shutdown.
July 4, 1987	1534	Reactor critical.
	2123	Unit on line.
July 5, 1987	0210	Unit holding at 250 MW - 30% power for Chemistry.
July 6, 1987	0030	Commenced ramp up to 48% power.
	0557	Unit holding at 340 MW - 48% power for Flux Mapping, and 1-PT-24 Calorimetric.
	0930	Commenced ramp up to 50% power, Flux Mapping and 1-PT-24 Calorimetric completed.
	0950	Unit holding at 420 MW - 50% power for Nuclear Instrumentation (N.I.) adjustments, and 1-PT-23, Quadrant Power Tilt Ratio (Q.P.T.R.)
	1630	Commenced ramp up to 64% power, N.I. adjustments and 1-PT-23 (Q.P.T.R.) completed.
	1900	Unit holding at 565 MW - 64% power for temperature on 'A' Moisture Separate Reheater, (M.S.R.).

VIRGINIA POWER
NORTH ANNA POWER STATION

UNIT NO. 1

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 6, 1987	2000	Commenced ramp up to 83% power.
July 7, 1987	0158	Unit holding at 814 MW - 83% power, due to 'A' M.S.R. Temperature Decrease.
	0240	Commenced rampdown to 50% power, to monitor 'A' M.S.R. temperature.
	0540	Unit holding at 445 MW - 50% power, to monitor 'A' M.S.R. temperature.
July 10, 1987	2103	Commenced rampdown to 0% power, to repair 'B' M.S.R. stop valve.
	2320	Unit off line.
	2340	Reactor shutdown.
July 12, 1987	0117	Reactor Critical.
	0356	Unit on line.
	0510	Unit holding at 251 MW - 30% power, for Chemistry.
	1519	Commenced ramp up to 85% power, released from Chemistry hold.
July 13, 1987	0400	Unit holding at 825 MW - 85% power, for Flux Mapping.
	1640	Commenced ramp up to 98% power, Flux Mapping completed.
	2110	Unit holding at 935 MW - 98% power, for 1-PT-24 Calorimetric.

VIRGINIA POWER
NORTH ANNA POWER STATION

UNIT NO. 1

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 13, 1987	2140	Commenced ramp up to 100% power, 1-PF-24 Calorimetric completed.
	2220	Unit stabilized at 953 MW - 100% power.
July 15, 1987	0636	Manual Reactor trip occurred at 953 MW - 100% power, due to 'C' Steam Generator tube rupture.
July 31, 1987	2400	Ended the month with Unit in Mode 5, due to tube inspections on Steam Generators.

OPERATING DATA REPORT

DOCKET NO. 50-339
 DATE 08-03-87
 COMPLETED BY Brenda Garner
 TELEPHONE (703) 894-5151 X2527

OPERATING STATUS

1. Unit Name: North Anna 2
2. Reporting Period: July, 1987
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): 963
7. Maximum Dependable Capacity (Net MWe): 915
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	5,087	58,103
12. Number of Hours Reactor Was Critical	744	4,875.7	46,501.8
13. Reactor Reserve Shutdown Hours	0	13.2	5,653
14. Hours Generator On-Line	744	4,862.8	45,733.3
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,743,077	13,411,706	119,723,902
17. Gross Electrical Energy Generated (MWH)	575,171	4,467,570	39,701,647
18. Net Electrical Energy Generated (MWH)	540,869	4,236,352	37,641,251
19. Unit Service Factor	100	95.6	78.7
20. Unit Availability Factor	100	95.6	78.7
21. Unit Capacity Factor (Using MDC Net)	79.5	91.0	71.8
22. Unit Capacity Factor (Using DER Net)	80.1	91.8	71.4
23. Unit Forced Outage Rate	0	0	9.6
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

Refueling Outage 8-16-87, 48 days

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. 50-339

UNIT NA-2

DATE 08-03-87

COMPLETED BY Brenda Garner

TELEPHONE 703-894-5151X2527

MONTH July, 1987

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>833</u>	17	<u>723</u>
2	<u>803</u>	18	<u>720</u>
3	<u>800</u>	19	<u>720</u>
4	<u>798</u>	20	<u>716</u>
5	<u>799</u>	21	<u>692</u>
6	<u>794</u>	22	<u>691</u>
7	<u>770</u>	23	<u>687</u>
8	<u>769</u>	24	<u>684</u>
9	<u>764</u>	25	<u>681</u>
10	<u>762</u>	26	<u>673</u>
11	<u>757</u>	27	<u>667</u>
12	<u>754</u>	28	<u>635</u>
13	<u>730</u>	29	<u>645</u>
14	<u>731</u>	30	<u>644</u>
15	<u>730</u>	31	<u>642</u>
16	<u>725</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. 50-339

REPORT MONTH July UNIT NAME NA-2

YEAR 1987 DATE 08-03-87

COMPLETED BY Brenda Garner

No Entry This Month

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-339

UNIT NAME North Anna 2

DATE 08-03-87

COMPLETED BY Brenda Garner
TELEPHONE (703) 894-5151 X2527

REPORT MONTH July

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code	Component Code	Cause & Corrective Action to Prevent Recurrence
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No Entry This Month

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

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 1, 1987	0000	Began the month with Unit at 880 MW - 92% power, power coast down due to zero boron.
	2155	Commenced rampdown of 30 MW to match average temperature (Tave) to reference temperature (Tref), due to zero boron.
	2350	Unit stabilized at 850 MW - 88% power.
July 6, 1987	2125	Commenced rampdown of 35 MW to match Tave to Tref, due to zero boron.
	2145	Unit stabilized at 815 MW - 85% power.
July 12, 1987	2200	Commenced rampdown of 35 MW to match Tave to Tref, due to zero boron.
	2345	Unit stabilized at 780 MW - 81% power.
July 21, 1987	0050	Commenced rampdown of 30 MW to match Tave to Tref, due to zero boron.
	0305	Unit stabilized at 735 MW - 76% power.
July 27, 1987	1920	Commenced rampdown of 25 MW to match Tave to Tref, due to zero boron.
	2300	Unit stabilized at 690 MW - 72% power.
July 31, 1987	2400	Ended the month with Unit at 680 MW - 72% power, due to zero boron.

VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

August 12, 1987

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 87-480
NO/DJV:jmj
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 AND 2
MONTHLY OPERATING REPORT

Enclosed is the Monthly Operating Report for North Anna Power Station Units 1 and 2 for the month of July 1987.

Very truly yours,



W. L. Stewart

Enclosures

cc: USNRC
101 Marietta Street, NW
Suite 2900
Atlanta, GA 30323

Mr. J. L. Caldwell
NRC Senior Resident Inspector
North Anna Power Station

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