

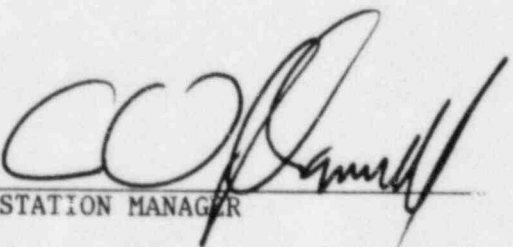
VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION

MONTHLY OPERATING REPORT

MONTH June YEAR 1983

APPROVED:


STATION MANAGER

8308110315 830701
PDR ADOCK 05000338
R PDR

IE24
1/1

OPERATING DATA REPORT

DOCKET NO. 50-338
 DATE 07-01-83
 COMPLETED BY G. D. Schmitendorf
 TELEPHONE (703) 894-5151 X2117

OPERATING STATUS

Notes

1. Unit Name: North Anna 1
2. Reporting Period: June 1983
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): 930
7. Maximum Dependable Capacity (Net MWe): 877
8. If Changes Occur in Capacity Ratings (Items No. 3 thru 7) Since Last Report, Give Reasons:

MDC Gross and MDC Net changed to reflect increased secondary plant efficiency from MSR modifications.

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	4,343	44,424
12. Number of Hours Reactor Was Critical	706	2,651.6	29,774.6
13. Reactor Reserve Shutdown Hours	14	1,691.4	2,945.5
14. Hours Generator On-Line	703.2	2,501	28,883.2
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,886,762	6,600,374	74,860,728
17. Gross Electrical Energy Generated (MWH)	630,370	2,206,895	23,991,427
18. Net Electrical Energy Generated (MWH)	597,997	2,091,984	22,612,717
19. Unit Service Factor	97.7	57.6	65.0
20. Unit Availability Factor	97.7	57.6	65.0
21. Unit Capacity Factor (Using MDC Net)	94.7	54.9	58.0
22. Unit Capacity Factor (Using DER Net)	91.6	53.1	56.1
23. Unit Forced Outage Rate	2.3	42.4	11.9
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

Scheduled Maintenance, 10-07-83, 10 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. 50-338

UNIT NA-1

DATE 07-01-83

COMPLETED BY G. Schmitendorf

TELEPHONE 703-894-5151X2117

MONTH June

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>879</u>	17	<u>872</u>
2	<u>878</u>	18	<u>874</u>
3	<u>877</u>	19	<u>872</u>
4	<u>872</u>	20	<u>877</u>
5	<u>869</u>	21	<u>884</u>
6	<u>697</u>	22	<u>886</u>
7	<u>99</u>	23	<u>886</u>
8	<u>403</u>	24	<u>885</u>
9	<u>845</u>	25	<u>885</u>
10	<u>885</u>	26	<u>863</u>
11	<u>881</u>	27	<u>877</u>
12	<u>888</u>	28	<u>877</u>
13	<u>888</u>	29	<u>879</u>
14	<u>887</u>	30	<u>880</u>
15	<u>888</u>	31	<u></u>
16	<u>885</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	07-01-83
COMPLETED BY	G. D. Schmitendorf
TELEPHONE	(703) 894-5151 X2502

REPORT MONTH June

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
83-04	830606	F	16.8	G	3	043	EB	CKTBRK	Vital Bus de-energized due to operator error during transfer of the Bus from inverter to the alternate source of power. The momentary loss of power resulted in a Turbine trip/reactor trip. The Vital Bus was immediately energized from the alternate source of power. The unit was stabilized and then returned to normal power operations. Personnel will be instructed, and the Abnormal Procedure associated with this situation revised; as to proper guidance in dealing with problems associated with transferring a Vital Bus.

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. 50-338REPORT MONTH June UNIT NAME NA-1YEAR 1983 DATE 07-01-83COMPLETED BY G. D. Schmitendorf

83-04 (G) (3) At 1902 on 6 June, 1983 , with the Unit at 100% power, Vital Bus 1-I was momentarily de-energized while transferring from the inverter (normal supply) to the SOLA transformer (alternate power supply). The loss of the vital bus resulted in opening all eight condenser waterbox outlet trip valves with a subsequent tripping of all four circulating water pumps, a loss of vacuum, and a turbine/trip reactor trip. Prior to the transfer it was observed that the interlock pin (used to indicate whether the inverter and SOLA transformer are in sync), was in the up position rather than the down position, which it must be in to allow the transfer to take place. In order to defeat this interlock and allow the transfer of the vital bus from the inverter to the SOLA transformer, the alternate source AC input breaker was opened. This allowed the interlock pin to drop down as the circuitry no longer sensed an out of sync condition. The power transfer switch was moved from the inverter to the SOLA transformer position and the alternate source AC input breaker immediately reclosed. That action momentarily separated the Vital Bus 1-I from both the inverter and the SOLA transformer, thus de-energizing the vital bus for approximately two seconds, causing a turbine trip/reactor trip. The Unit was stabilized in Mode 3 (Hot Standby) and necessary repairs to a blown rupture disc on Number 1 low pressure turbine commenced. The repairs were completed to the secondary plant, and a reactor start-up commenced at 0630 on 7 June, 1983. The Unit was placed on-line at 1151 on 7 June, 1983. Personnel will be instructed, and the Abnormal Procedure associated with this situation revised as to proper guidance in dealing with this and other problems associated with transferring a vital bus from one source to another.

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION

UNIT NO. 1

MONTH June

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.

June 1, 1983	0000	This month begins with the unit stable at 100% power.
June 6,	1902	Reactor Trip. Loss of Vital Bus I while transferring from inverter to SOLA transformer supply; causing loss of all four main circulators (Turbine Trip/Reactor Trip).
June 7,	0630	Commenced Reactor Start-up.
	0900	Reactor Critical.
	1151	Generator on-line.
	1500	Unit stabilized at 30% power for secondary chemistry hold.
June 8,	0519	Released from secondary chemistry hold. Commenced increasing power.
June 9,	0920	Unit stabilized at 100% power.
June 30,	2400	This month ends with the unit stable at 100% power.

AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-339

UNIT NA-2

DATE 07-01-83

COMPLETED BY G. Schmitendor

TELEPHONE 703-894-5151X2117

MONTH June

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1	<u>220</u>	17	<u>0</u>
2	<u>217</u>	18	<u>0</u>
3	<u>219</u>	19	<u>0</u>
4	<u>227</u>	20	<u>0</u>
5	<u>217</u>	21	<u>165</u>
6	<u>395</u>	22	<u>251</u>
7	<u>710</u>	23	<u>850</u>
8	<u>833</u>	24	<u>869</u>
9	<u>873</u>	25	<u>870</u>
10	<u>873</u>	26	<u>872</u>
11	<u>874</u>	27	<u>433</u>
12	<u>866</u>	28	<u>546</u>
13	<u>871</u>	29	<u>854</u>
14	<u>874</u>	30	<u>795</u>
15	<u>872</u>	31	<u></u>
16	<u>615</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.

OPERATING DATA REPORT

DOCKET NO. 50-339
DATE 07-01-83
COMPLETED BY G. D. Schmitendorf
TELEPHONE (703) 894-5151 X2117

OPERATING STATUS

Notes

1. Unit Name: North Anna 2
2. Reporting Period: June 1983
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): 939
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	4,343	22,295
12. Number of Hours Reactor Was Critical	618.5	2,770.0	15,273.1
13. Reactor Reserve Shutdown Hours	101.5	1,746.5	3,000.6
14. Hours Generator On-Line	601.3	2,697.3	15,150
15. Unit Reserve Shutdown Hours	0	0	0
16. Gross Thermal Energy Generated (MWH)	1,283,071	6,737,024	38,463,044
17. Gross Electrical Energy Generated (MWH)	416,200	2,194,024	12,783,337
18. Net Electrical Energy Generated (MWH)	390,230	2,074,122	12,123,740
19. Unit Service Factor	83.5	62.1	68.0
20. Unit Availability Factor	83.5	62.1	68.0
21. Unit Capacity Factor (Using MDC Net)	60.9	53.7	61.1
22. Unit Capacity Factor (Using DER Net)	59.8	52.7	60.0
23. Unit Forced Outage Rate	16.5	9.0	18.2
24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each):			

Scheduled Maintenance, 11-18-83, 10 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

UNIT SHUTDOWNS AND POWER REDUCTIONS

DOCKET NO. 50-339

UNIT NAME North Anna 2

DATE 07-01-83

COMPLETED BY G. D. Schmitendorf

TELEPHONE (703) 894-5151 X2502

REPORT MONTH June

No.	Date	Type ¹	Duration (Hours)	Reason ²	Method of Shutting Down Reactor ³	Licensee Event Report #	System Code ⁴	Component Code ⁵	Cause & Corrective Action to Prevent Recurrence
83-09	830616	F	104.4	A	1	050	EE	ENGINE	"2J" Diesel Generator cooling water leak led to a cracked piston and cylinder sleeve. Rampdown to off-line and cool-down to Mode 5 for repairs to diesel. Repairs were completed and diesel proved operable. Unit returned to on-line.
83-10	830627	F	14.3	A	3	NA	NA	NA	Main Generator voltage fluctuation resulted in a turbine/reactor trip on generator differential lockout. Voltage regulator inspected and no failures were discovered. Unit returned to on-line. Exact cause of regulator malfunction still under investigation.
83-11	830630	F	0	A	5	NA	NA	NA	Unit rampdown to reduce generator leads temperatures, allowing replacement of worn bearings on the Generator Leads Cooling Fan. Repairs were made and the unit returned to full power.

1

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 (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)

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Exhibit H - Same Source

UNIT SHUTDOWN AND POWER REDUCTIONS

EXPLANATION SHEET DOCKET NO. 50-339
REPORT MONTH June UNIT NAME NA-2
YEAR 1983 DATE 07-01-83
COMPLETED BY G. D. Schmitendorf

- 83-09 (A) (1) At 1439 on June 16, 1983, with the unit at 100% power a unit rampdown to off-line was commenced due to "2J" Diesel Generator being declared inoperable. Subsequently the unit was place in Mode 5 (Cold Shutdown) at 0841 on June 17, 1983 in accordance with Technical Specifications while repairs to the diesel were made. Due to several unexplained trips of the "2J" diesel, it was decided to disassemble the diesel. It was discovered that cooling water was leaking into the crankcase through several gaskets (injector seals and upper crankshaft seals). The No. 3 upper piston and its associated cylinder sleeve were found to be cracked. The cracked piston and cylinder sleeve were attributed to the inleakage of cooling water. The "2J" Diesel Generator was repaired and tested for cooling water leakage following re-assembly with satis-factory results. The diesel was subsequently tested, proved operable and returned to service at 0212 on June 20, 1983. The Unit was returned to on-line at 0334 on June 21, 1983.
- 83-10 (A) (3) At 1155 on June 27, 1983, with Unit at 100% power, Main Generator voltage fluctuations resulted in a Turbine trip on generator differential lockout and subsequent reactor trip. The trip was due to a malfunction of the Main Generator voltage regulator. The voltage regulator was inspected with no failures within the voltage regulator circuitry discovered. The exact cause of the voltage regulator malfunction is still being investigated. The unit was stabilized and a start-up commenced at 1447 on 27 June, 1983. A reactor trip due to a turbine first stage pressure spike occurred during the recovery but prior to placing the unit on line. The start-up was recommenced at 2239 on 27 June, 1983 with the unit placed on-line at 0213 on 28 June, 1983.

83-11 (A) (5) At 1127 on June 30, 1983, a Unit rampdown was commenced to approximately 60% power in order to maintain the Main Generator leads bus duct temperatures within limits while worn bearings were replaced in the generator leads cooling fan. The Unit was stabilized at 64% power in preparation for making the repairs. During the period that repair work was performed the bus duct temperatures (monitored locally) and all other generator parameters, were closely monitored. All parameters were well within limits allowed and a ramp-up to 100% power was commenced at 1504 on 30 June, 1983. The Unit reached 100% power at 1830 on 30 June, 1893. Final alignment and adjustments were made to the fan and its associated motors. The Generator Leads Cooling Fan was tested, proved satisfactory, and returned to service.

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION

UNIT NO. 2

MONTH June

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.

June 1, 1983	0000	This month begins with the unit stable at 30% power and holding due to secondary chemistry.
June 6,	0035	Released from chemistry hold. Commenced increasing power.
	0840	Stabilized at 50% power for Turbine vibration readings.
	1017	Placed in secondary chemistry hold
	1648	Released from secondary chemistry hold. Commenced increasing power.
	2235	Stabilized at 68% power (610 MW) for secondary chemistry hold.
June 7,	0050	Released from secondary chemistry hold. Commenced increasing power.
	0740	"A" main feedwater regulating valve failed to approximately the 50% open position. Bypass regulating valve was fully opened and main feedwater regulating valve manually overridden. The Unit was ramped down to approximately 75% power during the transient.
	0800	The cause of the main feedwater regulating valve failure was attributed to dirt found in the control air system. The valve was tested and operated properly. Commenced increasing power.
June 8,	2100	Unit stabilized at 100% power.

June 16,	1439	Commenced Unit rampdown to off-line and cooldown to Mode 5 (Cold Shutdown) due to "2J" Diesel being declared inoperable. Cooling water leakage into crankcase resulted in a cracked piston and cylinder sleeve.
	1929	Generator off-line.
	1958	Commenced Reactor Shutdown.
June 17,	0841	Entered Mode 5 (Cold Shutdown).
June 20,	0238	Commenced heat-up. Repairs completed and diesel generator proved operable.
	1929	Commenced Reactor Start-up.
	1958	Reactor Critical.
June 21,	0344	Generator on-line.
	0440	Unit stabilized at 30% power for secondary chemistry hold.
June 22,	1841	Released from chemistry hold. Commenced increasing power.
	2010	Stabilizing at 50% power for Turbine Vibration readings.
	2129	Commence increasing power to 75%.
	2320	Stabilized at 75% power for Turbine Vibrations readings.
June 23,	0015	Commenced increasing power to 100%.
	0430	Unit stabilized at 100% power.
June 27	1155	Reactor Trip. Voltage regulator malfunction caused generator/turbine/reactor trip. The exact cause of the generator excitation problem is still under investigation.
	1447	Commenced Reactor Start-up.
	1513	Reactor Critical.
	2239	Reactor Trip. The trip was due to a First Stage Pressure spike. Re-commenced Reactor Start-up.

June 28,	0058	Reactor Critical.
	0213	Generator on-line.
	0320	Stabilized at 30% power for secondary chemistry hold.
	0748	Released from secondary chemistry hold. Commenced increasing power.
	1413	Unit stabilized at 100% power.
June 30,	1127	Commenced unit rampdown to approximately 60% power in order to maintain generator leads bus duct temperatures within limits while worn bearings are replaced in the Generator Leads Cooling Fan. The bus duct cooling temperatures were monitored locally.
	1307	Unit stabilized at 64% power.
	1442	Commenced increasing power to 68%. Electricians monitoring bus duct temperature.
	1500	Unit stabilized at 68% power. Bus duct and generator data further analyzed.
	1504	Commenced increasing power to 100%. Bus duct temperatures to be monitored by electrical department while work continues on Generator Leads Cooling Fan.
	1830	Unit stable at 100% power.
	2400	This month ends with the unit stable at 100% power. Final alignment/adjustments are in progress on the Generator Leads Cooling Fan/Motor.

VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

July 14, 1983

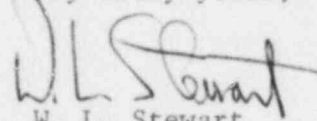
Mr. N. M. Haller, Director
Office of Management and Program Analysis
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Serial No. 406
NO/JHL:acm
Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Dear Mr. Haller:

Enclosed is the Monthly Operating Report for North Anna Power Station Unit Nos. 1 and 2 for the month of June, 1983.

Very truly yours,


W. L. Stewart

Enclosure (3 copies)

cc: Mr. R. C. DeYoung, Director (12 copies)
Office of Inspection and Enforcement

Mr. James P. O'Reilly (1 copy)
Regional Administrator
Region II

Mr. M. B. Shymlock
NRC Resident Inspector
North Anna Power Station

IE 24

1/1