

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

September 11, 1992

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

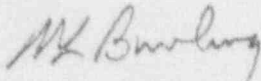
Serial No. 92-588  
NL&P/JM' jmj  
Docket ' 50-338  
50-339  
License Nos. NPF-4  
NPF-7

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 August 1992. Also enclosed are corrected pages to the July 1992 North Anna Units 1 & 2 Monthly Operating Report.

Very truly yours,

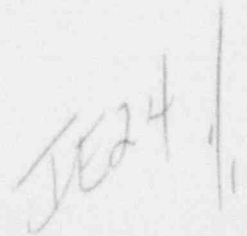


M. L. Bowling, Manager  
Nuclear Licensing and Programs

Enclosure

cc: U.S. Nuclear Regulatory Commission  
101 Marietta Street, NW  
Suite 2900  
Atlanta, GA 30323

Mr. M. S. Lesser  
NRC Senior Resident Inspector  
North Anna Power Station



VIRGINIA POWER COMPANY  
NORTH ANNA POWER STATION  
MONTHLY OPERATING REPORT

MONTH: August YEAR: 1992

Approved:

*JA*  
\* Station Manager

OPERATING DATA REPORT

DOCKET NO.: 50-338  
 DATE: August 3, 1992  
 CONTACT: G. E. Kane  
 PHONE: (703) 894-2101

OPERATING STATUS

1. Unit Name:.....North Anna 1
2. Reporting Period:.....AUGUST 1992
3. Licensed Thermal Power (Mwt):..... 2,748
4. Nameplate Rating (Gross MWe):..... 947
5. Design Electrical Rating (Net MWe):..... 907
6. Maximum Dependable Capacity (Gross MWe):.. 894
7. Maximum Dependable Capacity (Net MWe):.... 848
  
8. If changes occur in Capacity Ratings (Items No. 3 thru 7) since last report, give reasons: N/A

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9. Power level to which restricted, if any (Net MWe): N/A
10. Reasons for restrictions, if any: N/A

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	This Month	Y-t-O	Cumulative
11. Hours in Reporting Period.....	744.0	5,855.0	124,427.0
12. Number of Hours Reactor was Critical.....	744.0	4,313.3	91,001.8
13. Reactor Reserve Shutdown Hours.....	0.0	36.3	6,758.0
14. Hours Generator On-Line.....	744.0	4,296.2	88,067.7
15. Unit Reserve Shutdown Hours.....	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH).....	2,029,325.0	11,604,869.2	234,557,641.6
17. Gross Electrical Energy Generated (MWH).....	664,647.0	3,826,570.0	77,084,417.0
18. Net Electrical Energy Generated (MWH).....	632,432.0	3,636,321.0	72,990,938.0
19. Unit Service Factor.....	100.0%	73.4%	70.8%
20. Unit Availability Factor.....	100.0%	73.4%	70.8%
21. Unit Capacity Factor (using MDC Net).....	100.2%	71.3%	65.6%
22. Unit Capacity Factor (using DER Net).....	93.7%	68.5%	64.7%
23. Forced Outage Rate.....	0.0%	0.0%	11.7%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and Duration of Each) Steam Generator Replacement and Refueling Outage, January 1993, approximately 120 days.

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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: Sept. 3, 1992  
 Contact: G. E. Kane  
 Phone: (703) 894-2101

MONTH: August 1992

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY LEVEL LEVEL (MWe-Net)
1	<u>856</u>	17	<u>859</u>
2	<u>857</u>	18	<u>857</u>
3	<u>857</u>	19	<u>857</u>
4	<u>858</u>	20	<u>857</u>
5	<u>858</u>	21	<u>857</u>
6	<u>856</u>	22	<u>857</u>
7	<u>858</u>	23	<u>856</u>
8	<u>859</u>	24	<u>858</u>
9	<u>859</u>	25	<u>857</u>
10	<u>859</u>	26	<u>856</u>
11	<u>858</u>	27	<u>856</u>
12	<u>814</u>	28	<u>856</u>
13	<u>791</u>	29	<u>855</u>
14	<u>795</u>	30	<u>857</u>
15	<u>808</u>	31	<u>856</u>
16	<u>859</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.

REPORT MONTH: Aug. 1992

DOCKET NO.: 50-338  
UNIT NAME: NA-1  
DATE: Sept. 3, 1992  
CONTACT: G. E. Kane  
PHONE: (703) 894-2101

No.	Date	1 Type	2 Duration (hrs)	Reason	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:
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)

UNIT SHUTDOWNS AND POWER REDUCTIONS

F=Administrative  
G=Operational Error  
H=Other (explain)

9=Other

5:  
Exhibit H - Same Source

UNIT SHUTDOWN AND POWER REDUCTIONS  
Explanation Sheet

Docket No.: 50-338

Report Month August Unit Name: NA-1

Year: 1992 Date: Sept. 3, 1992

Contact: G. E. Kane

\*No entry this month.

NORTH ANNA POWER STATION

UNIT NO.: 1  
 MONTH: August

SUMMARY OF OPERATING EXPERIENCE

Page 1 of 1

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>
August 01, 1992	0000	Began month with unit at 95% power, 898 Mwe.
August 12, 1992	0826	Commenced unit ramp-down to 90% power for TVFT.
	0903	Unit stable at 90% power, 870MWe for TVFT.
	1003	TVFT completed satisfactorily.
	1122	Removed "B" Main Condenser Waterbox from service for maintenance.
August 13, 1992	0559	Returned "B" Main Condenser Waterbox to service.
	0852	Removed "A" Main Condenser Waterbox from service for maintenance.
August 14, 1992	0138	Returned "A" Main Condenser Waterbox to service.
	0350	Removed "D" Main Condenser Waterbox from service for maintenance.
	1817	Returned "D" Main Condenser Waterbox to service.
August 15, 1992	0032	Removed "C" Main Condenser Waterbox from service for maintenance.
	1720	Returned "C" Main Condenser Waterbox to service.
	1730	Commenced unit ramp-up to 95% power.
	1817	Unit stable at 95% power, 900 MWe.
August 31, 1992	2400	Ended month with unit at 95% power, 900 MWe.

OPERATING DATA REPORT

DOCKET NO.: 50-339  
 DATE: August 3, 1992  
 CONTACT: G. E. Kane  
 PHONE: (703) 894-2101

OPERATING STATUS

- 1. Unit Name:.....North Anna 2
- 2. Reporting Period:.....August 1992
- 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	5,855.0	102,695.0
12. Number of Hours Reactor was Critical.....	721.4	4,379.3	84,115.2
13. Reactor Reserve Shutdown Hours.....	22.1	187.0	6,244.4
14. Hours Generator On-Line.....	701.8	4,309.7	83,084.1
15. Unit Reserve Shutdown Hours.....	0.0	0.0	0.0
16. Gross Thermal Energy Generated (MWH).....	1,979,413.6	11,847,232.4	223,664,365.5
17. Gross Electrical Energy Generated (MWH).....	545,295.0	3,881,855.0	73,261,981.0
18. Net Electrical Energy Generated (MWH).....	612,247.0	3,684,234.0	70,183,967.0
19. Unit Service Factor.....	94.3%	73.6%	80.9%
20. Unit Availability Factor.....	94.3%	73.6%	80.9%
21. Unit Capacity Factor (using MDC Net).....	90.5%	69.2%	75.9%
22. Unit Capacity Factor (using DER Net).....	90.7%	69.4%	75.3%
23. Forced Outage Rate.....	5.7%	1.6%	5.8%

24. Shutdowns Scheduled Over Next 6 Months (Type, Date, and 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.: 50-339  
 Unit: NA-2  
 Date: Sept. 3, 1992  
 Contact: G. E. Kane  
 Phone: (703) 894-2101

MONTH: August 1992

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY LEVEL (MWe-Net)
1	<u>902</u>	17	<u>898</u>
2	<u>903</u>	18	<u>898</u>
3	<u>902</u>	19	<u>898</u>
4	<u>903</u>	20	<u>883</u>
5	<u>903</u>	21	<u>898</u>
6	<u>296</u>	22	<u>898</u>
7	<u>0</u>	23	<u>899</u>
8	<u>165</u>	24	<u>899</u>
9	<u>803</u>	25	<u>898</u>
10	<u>894</u>	26	<u>897</u>
11	<u>895</u>	27	<u>898</u>
12	<u>896</u>	28	<u>899</u>
13	<u>898</u>	29	<u>899</u>
14	<u>898</u>	30	<u>899</u>
15	<u>898</u>	31	<u>899</u>
16	<u>898</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: Aug. 1992

DOCKET NO.: 50-339  
 UNIT NAME: NA-2  
 DATE: Sept. 3, 1992  
 CONTACT: G. E. Kane  
 PHONE: (703) 894-2101

No.	Date	Type <sup>1</sup>	Duration (hrs)	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
92-05	920806	F	42.3	A	3	92-007	SB	ISV	Rx Trip/SI due to "C" Main Steam Trip Valve failing closed.

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.: 50-339

Report Month August Unit Name: NA-2

Year: 1992 Date: Sept. 3, 1992

Contact: G. E. Kane

#92-05        On August 6, 1992, at 0751 hours, with Unit 2 at 100 percent power (Mode 1), the "C" main steam trip valve (MSTV) failed shut causing a safety injection and reactor trip. The initiating signal for the safety injection was high steam line flow coincident with low steam line pressure in two out of three main steam lines. The cause of the "C" MSTV closure has been attributed to failure of the "C" MSTV air cylinder rupture disc.

Following the trip pressurizer (PZR) level indication went offscale high due to the SI flow and letdown isolation. Once this occurred fluctuation in PZR pressure and PZR pressure master controller response led to cycling of one of the PZR power operated relief valves (2-RC-PCV-2455C which is controlled by the master controller). It should be noted that RCS pressure never reached the setpoint (2235 psig) for PORV actuation.

The rupture discs on the "C" MSTV air cylinders were replaced, and the rupture discs associated with the other two MSTV's were inspected. Post maintenance testing was completed to ensure all rupture discs and control circuitry were operable. An evaluation will be performed to determine if it is prudent to replace current rupture discs with discs that have better operating margins.

## NORTH ANNA POWER STATION

UNIT NO.: 2  
 MONTH: August

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>
August 01, 1992	0000	Began month with unit at 100% power, 899 MWe.
August 06, 1992	0751	Rx Trip/SI on High Steam flow coincident with low steam pressure. Entered 2-E-0.
	0756	Entered EPIP's, declared NOUE.
	0802	Transitioned to 2-ES-1.1, "SI Termination".
	0804	Secured "C" HHSI pump (2-CH-P-1C).
	0806	PZR level indication off scale high, PZR PORV (2-RC-PCV-2455C) cycled in response to master pressure controller high output.
	0808	Secured LHSI pumps (2-SI-P-1A,1B).
	0809	Discovered "C" Main Steam Trip Valve air cylinder diaphragm ruptured.
	0850	Terminated NOUE.
	1829	"C" MSTV repaired and declared operable.
	August 7, 1992	0540
0559		Entered Mode 2.
0628		Rx critical.
0646		Rx at point of adding heat (POAH) and holding for chemistry.
August 8, 1992	0110	Released from chemistry hold.
	0123	Entered Mode 1.
	0207	Unit on line.
	0305	Stabilized at 30% power for chemistry hold.

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>
August 8, 1992	2400	Cleared chemistry hold.
August 9, 1992	0017	Commenced ramp up to 100% power.
	0832	Unit stabilized at 99.4% power, #4 governor valve full open.
August 12, 1992	1715	Throttled open bypass on first point feedwater heaters to boost Rx power to 100%.
	1821	Rx power at 100%, 900 MWe.
August 31, 1992	2400	Ended month with unit at 100% power, 899MWe.

Correction to July 92 Operating Report

The date reported in the Unit 1 and 2 "Summary of Operating Experience" for the fire at the Intake Structure was reported incorrectly. The actual date for the fire was 29 July 1992. Please see the attached corrected Unit 1 and 2 "Summary of Operating Experience" Reports.

## NORTH ANNA POWER STATION

UNIT NO.: 1MONTH: JulySUMMARY OF OPERATING EXPERIENCE

Page 1 of 1

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, 1992	0000	Began month with unit at 95% power, 907MWe.
July 11, 1992	0815	Commenced unit ramp-down to 870MWe for TVFT.
	0839	Unit stable at 870MWe for TVFT.
	1027	TVFT completed satisfactorily.
	1031	Commenced unit ramp-up to 95% power.
July 18, 1992	1116	Unit stable at 95% power, 901MWe.
	0014	Commenced unit ramp-down to approximately 90% power for repairs to A condenser waterbox.
July 19, 1992	0053	Unit stable at 90% power, 822MWe.
	0609	Commenced unit ramp-up to 95% power following repairs to A condenser waterbox.
July 23, 1992	0830	Unit stable at 95% power, 904MWe.
	0009	Commenced unit ramp-down to approximately 90% power for repairs to condenser waterboxes.
July 26, 1992	0100	Unit stable at 89% power, 850MWe.
	0205	Commenced unit ramp-up to 95% power following repairs to B, C, and D condenser waterboxes.
July 29, 1992	0306	Unit stable at 95% power, 906MWe.
	0412	Fire reported at Intake Structure.
	0425	Initiated "Notification of Unusual Event" due to fire lasting greater than 10 minutes.
	0431	Fire extinguished.
July 31, 1992	0459	Terminated "Notification of Unusual Event."
	2400	Ended month with unit at 95% power, 898MWe.

## NORTH ANNA POWER STATION

UNIT NO.: 2MONTH: JulySUMMARY OF OPERATING EXPERIENCE

Page 1 of 1

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, 1992	0000	Began month with unit at 100% power, 953MWe.
July 29, 1992	0412	Fire reported at Intake Structure.
	0425	Initiated "Notification of Unusual Event" due to fire lasting greater than 10 minutes.
	0431	Fire extinguished.
	0459	Terminated "Notification of Unusual Event."
July 31, 1992	0840	Commenced unit ramp-down to 890MWe for TVFT.
	0910	Unit stable at 889MWe for TVFT.
	1230	TVFT completed satisfactorily.
	1320	Commenced unit ramp-up to 100% power.
	1502	Unit stable at 100% power, 904MWe.
	2400	Ended month with unit at 100% power, 899MWe.