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VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
P. O. BOX 102
MINERAL, VIRGINIA 25117

10 CFR 50.73

February 12, 1992

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

Serial No. N-92-04
NAPS:MJB
Docket Nos. 50-339
License Nos. NPF-7

Dear Sirs:

The Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Unit 2.

Report No. 50-339/92-001-00

This Report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to the Corporate Management Safety Review Committee for its review.

Very Truly Yours,



G.E. Kane
Station Manager

Enclosure:

cc: U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W.
Suite 2900
Atlanta, Georgia 30323

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

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) NORTH ANNA POWER STATION UNIT 2 DOCKET NUMBER (2) 050003391 OF 03

TITLE (4) REACTOR TRIP CAUSED BY MFRV CLOSURE UPON FAILURE OF DRIVER CARD

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER(S)	
01	29	92	92	001	0	02	12	92		050003391	

OPERATING MODE (9) 1

POWER LEVEL (10) 089

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50. (Check one or more of the following) (11)

20.402(b)	20.405(c)	<input checked="" type="checkbox"/> 50.73(a)(1)(v)	13.71(a)
20.405(a)(1)(i)	50.73(a)(1)(i)	50.73(a)(2)(v)	73.71(c)
20.405(a)(1)(ii)	50.73(a)(2)(ii)	50.73(a)(3)(v)	OTHER (Specify in Abstract below with last NRC Form 308)
20.45(a)(1)(i)(A)	50.73(a)(3)(i)	50.73(a)(3)(ii)(A)	
20.405(a)(1)(iii)	50.73(a)(2)(ii)	50.73(a)(3)(ii)(B)	
20.405(a)(1)(iv)	50.73(a)(2)(iii)	50.73(a)(3)(iv)	

LICENSEE CONTACT FOR THIS LER (12)

NAME: G. E. Kane, Station Manager

TELEPHONE NUMBER: 703 894 2101

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS
X	S	JFCV	C63	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, provide EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately three single-space typewritten lines) (16)

On January 29, 1992, at 0325 hours, with Unit 2 at 89 percent power, the "C" Main Feed Regulating Valve (MFRV) closed due to a driver card failure causing a reactor trip. The initiating signal for the reactor trip was "C" Steam Generator low level coincident with a steam flow greater than feedwater flow mismatch. This event is reportable pursuant to 10 CFR 50.73 (a) (2) (iv), and a four hour report was made pursuant to 10 CFR 50.72 (b) (2) (ii).

The "C" MFRV closure and subsequent reactor trip was caused by failure of the control system driver card.

No significant safety consequences resulted from this event because all safety systems responded appropriately. Therefore, the health and safety of the public was not affected at any time during this event.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-830), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) North Anna Power Station Unit 2	DOCKET NUMBER (2) 0500033992	LER NUMBER (3)		PAGE (3) 02 OF 03
		YEAR	SEQUENTIAL NUMBER	
		92	001	

TEXT (if more space is required, use additional NRC Form 306A's (17))

1.0 Description of the Event

On January 29, 1992, at 0325 hours, with Unit 2 at 89 percent power (mode 1), due to end of cycle power coastdown, the "C" Main Feedwater Regulating Valve (EIS System Identifier S3, Component Identifier CV) closed due to a control system driver PC card failure causing a reactor trip. The initiating signal for the reactor trip was "C" Steam Generator low level coincident with a steam flow greater than feedwater flow mismatch. This event is reportable pursuant to 10 CFR 50.73 (a)(2)(iv) as an automatic actuation of an Reactor Protection System. A four hour report was made at 0443 hours pursuant to 10 CFR 50.72 (b)(2)(ii).

Control Room Operators responded to the event in accordance with Emergency Procedure E-0, "Reactor Trip or Safety Injection". RCS temperature and pressure decreased to 539 °F and 1930 psig before recovering to 547 °F and 2235 psig. Plant safety equipment responded appropriately during the reactor trip.

After event investigation and corrective action were completed, Unit 2 was taken to critical on January 29, at 1758 hours.

2.0 Significant Safety Consequences and Implications

No significant safety consequences resulted from this event because all safety systems responded appropriately, and there was no release of radioactive materials. Therefore, the health and safety of the public was not affected at any time during this event.

3.0 Cause of the Event

The cause of the steam flow greater than feed flow reactor trip was a failed power supply on the driver card for the "C" main feedwater regulating valve. When power was lost, the valve failed closed and isolated normal feedwater flow to the "C" steam generator.

4.0 Immediate Corrective Actions

Upon determination that "C" MFRV had closed, the operator attempted to open the valve using the controller on the benchboard. Since the card had failed, the controller would not respond. Control room personnel then responded to the reactor trip in accordance with Emergency Procedure E-0, "Reactor Trip or Safety Injection".

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) North Anna Power Station Unit 2	DOCKET NUMBER (2) 05000339	LER NUMBER (6)		PAGE (3) 03 OF 03
		YEAR 92	SEQUENTIAL NUMBER 001	

TEXT (If more space is required, use additional NRC Form 365A's) (17)

5.0 Additional Corrective Actions

The failed MFRV driver card, as well as the driver cards for the other two MFRVs, were replaced with a new cards and successful functional tests were performed.

6.0 Actions to Prevent Recurrence

An engineering evaluation and root cause investigation is being conducted to discern any contributing factors to the card failure. Further actions to prevent a recurrence will be based upon the results of the evaluation and investigation. These results will be factored into any corrective actions selected for implementation from previous root cause analyses of other driver card failures.

7.0 Similar Events

LER N2-91-009-00 documents a Unit 2 reactor trip from 100 percent power due to a failed driver card on the "B" MFRV. Results of an engineering and root cause evaluation are being studied at this time to determine the appropriate action for improving the driver card power supply reliability.

LER N1-90-001-00 documents a Unit 1 reactor trip from 100 percent power due to a failed driver card on the "C" MFRV. A root cause evaluation determined that some components on Westinghouse 7300 driver cards should be replaced every five years due to equipment aging. Upon determining that an aging problem existed, all driver cards for the MFRVs on Units 1 & 2 were replaced with refurbished driver cards during the last refueling outages.

LER N1-89-005-00 documents a Unit 1 reactor trip from 76 percent power due to fatigue failure of the Instrument Air supply line to the "C" MFRV.

8.0 Additional Information

Unit 1 was in Cold Shutdown (mode 5) throughout the event and was not affected.