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VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION
P. O. BOX 402
MINERAL, VIRGINIA 20117

10 CFR 50.73

May 8, 1992

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

Serial No. N-92-18
NAPS: MJB
Docket Nos. 50-339
License Nos. NPF-7

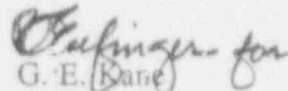
Dear Sirs:

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

Report No. 50-339/92-012-00

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. Bare
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-500), 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** PAGE (3) **1 OF 03**

TITLE (4) **LOSS OF POWER TO 2H EMERGENCY BUS DURING UNDERVOLTAGE/DEGRADED VOLTAGE TESTING**

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 NAMES	DOCKET NUMBER(S)
04	19	92	92	012	00	05	08	92		05000339
										05000339

OPERATING MODE (9) **5** THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)

20.402(b)	<input type="checkbox"/>	50.73(a)(2)(iv)	<input checked="" type="checkbox"/>	73.71(ii)
20.405(a)(1)(i)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	73.71(iii)
20.405(a)(1)(ii)	<input type="checkbox"/>	50.73(a)(2)(vi)	<input type="checkbox"/>	OTHER (Specify in Alphabetical Order and in Text, NRC Form 368)
20.405(a)(1)(iii)	<input type="checkbox"/>	50.73(a)(2)(vii)(A)	<input type="checkbox"/>	
20.405(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(vii)(B)	<input type="checkbox"/>	
20.405(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(viii)	<input type="checkbox"/>	

POWER LEVEL (10) **000**

LICENSEE CONTACT FOR THIS LER (12)

NAME: **G. E. Kane, Station Manager** TELEPHONE NUMBER: **703894-2101**

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

YES NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately three-eighths space typewriter line) (16)

On April 19, 1992, at 1700 hours, with Unit 2 in Mode 5, Cold Shutdown, the 2H 4160-volt Emergency Bus became de-energized during response time testing of the 2H Undervoltage/Degraded Voltage circuitry. This event is reportable pursuant to 10 CFR 50.73 (a) (2) (iv). A four hour report was made pursuant to 10 CFR 50.72 (a) (2) (iii). In addition, Service Water flow to the Component Cooling Heat Exchangers which provides cooling to the Residual Heat Removal (RHR) system was lost momentarily.

Throughout this event, the RHR and Component Cooling pumps were being powered from 2J Emergency Bus. A Service Water pump powered from the 1J Emergency Bus was immediately started and Service Water flow was restored.

The 2H Emergency Diesel Generator was in Manual-Local for the test and therefore was not available to start and re-energize the bus. The appropriate abnormal procedures were entered and the bus was re-energized from offsite power at 1712 hours.

No significant safety consequences resulted from this event because all safety systems responded appropriately, Service Water flow was immediately reestablished, 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.

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-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20585, 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) 02 OF 03
		YEAR 92	SEQUENTIAL NUMBER 012	REVISION NUMBER 00	

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

1.0 Description of the Event

On April 19, 1992, at 1700 hours, with Unit 2 in Mode 5, Cold Shutdown, the 2H 4160-volt Emergency Bus (EIS System Identifier EK, Component Identifier BU) became de-energized during performance of 2-PT-36.11H, Degraded Voltage And Loss Of Voltage Time Response Test For 2H Bus. The 2H Emergency Diesel Generator was in Manual-Local as required by the test procedure and therefore was not available to start and re-energize the bus. This event is reportable pursuant to 10 CFR 50.73 (a) (2) (iv). A four hour report was made pursuant to 10 CFR 50.72 (a) (2) (ii). In addition, Service Water (EIS System Identifier HI) flow to the Component Cooling Heat Exchangers (EIS System Identifier CC, Component Identifier HX) which provides cooling to the Residual Heat Removal (RHR) (EIS System Identifier BP) system was lost momentarily.

Throughout this event, the in-service RHR and Component Cooling pumps were being powered from 2J Emergency Bus. A Service Water pump powered from the 1J Emergency Bus was immediately started and Service Water flow was restored. Even though Service Water flow was interrupted momentarily, RCS temperature remained constant because forced flow through the RCS was maintained and the Component Cooling System acted as the heat sink.

Control Room Operators responded to the loss of power event in accordance with Abnormal Procedure 0-AP-10, "Loss of Electrical Power". The bus was reenergized from offsite power at 1712 hours in accordance with 2-MOP-6.70, "2H 4160-Volt Emergency Bus."

2.0 Significant Safety Consequences and Implications

No significant safety consequences resulted from this event because all safety systems responded appropriately, Service Water flow was restored immediately, 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 event is indeterminate. During the performance of 2-PT-36.11H, the electrician observed an arc while lifting the final lead which would isolate the relay. This could have caused the bus to become deenergized, but it could not be proved conclusively. A review of the procedures and methods used during response time testing of the individual relays did not reveal any problems. The order of lifting leads and placing jumpers was verified to be correct. A shielded screwdriver was used and all lifted leads had nonconducting spots placed on them as soon as the lead was lifted.

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-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) 065000339	LER NUMBER (6)		PAGE (3) 03 of 03
		YEAR 92	SEQUENTIAL NUMBER 012	

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

4.0 Immediate Corrective Actions

Upon loss of the bus, the Unit 1 operator immediately restored Service Water flow to Unit 2 by starting the Service Water pump powered from the 1J Emergency Bus. Control room personnel then responded to the loss of the bus in accordance with Abnormal Procedure 0-AP-10, "Loss of Electrical Power".

5.0 Additional Corrective Actions

The bus was re-energized from offsite power at 1712 hours in accordance with 2-MOP-6.70, "2H 4160-Volt Emergency Bus". The response time test was repeated using a chart recorder to obtain the response time of the relay and completed satisfactorily.

6.0 Actions to Prevent Recurrence

The procedures used to perform response time testing of the 1M, 1J, 2H, and 2J Undervoltage/Degraded Voltage circuitry will be revised so that chart recorders are used to obtain the response time of the relays instead of lifting leads, placing jumpers, and then obtaining the response time of the relays. This methodology change will prevent challenging any safety functions such as shutdown cooling. These procedures will be revised before they are performed again. Finally, System Engineering will verify the leads and termination points for the 2H Undervoltage/Degraded Voltage circuitry is in agreement with the station drawings during the next scheduled refueling outage.

7.0 Similar Events

LER N2-90-09-00 documents that the 2J 4160-volt Emergency Bus was de-energized during the performance of a Degraded Voltage/Undervoltage Functional test.

LER N1-87-013-00 documents that the 1H 4160-volt Emergency Bus was de-energized when a Degraded Voltage relay was energized during the performance of an Electrical Maintenance procedure.

8.0 Additional Information

Unit 1 was in Mode 1, at 95 percent power throughout the event and was not affected.