10 CFR 50.73

March 24, 1992

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

Serial No.   N-92-07
NAPS:WCH
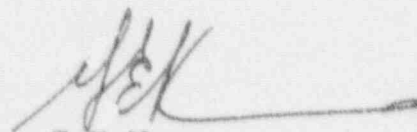Docket Nos.   50-339
License Nos.   NPF-7

Dear Sirs:

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

Report No. 50-339/92-002-00

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

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
North Anna Power Station Unit 2	0 5 0 0 0 3 3 9	1 OF 0 4

TITLE (4)

INADVERTENT ESF ACTUATION DURING CDA FUNCTIONAL TEST

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)
										0 5 0 0 0
0 2	2 9	9 2	9 2	0 0 2	0 0	0 3	2 4	9 2		DOCKET NUMBER(S) 0 5 0 0 0

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)			
		20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	71.71(b)
POWER LEVEL (10)	0 0 0	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)		
NAME		TELEPHONE NUMBER
G. E. Kane, Station Manager	AREA CODE 7 0 3	8 9 4 - 2 1 0 1

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS
X	J C	R L Y	W 1 2 0	Y						

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO					

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

On February 29, 1992, at 0210 hours, Unit 2 was in Mode 5 with the Containment Depressurization Actuation (CDA) Functional Test in progress. Electricians were in the process of removing a jumper, which was installed per the test procedure, that bypassed the CDA SSPS relay contacts which close the containment Instrument Air (IA) valves. Although the CDA and Phase B isolation signals had been reset following the test, the relay that controls the IA trip valve failed to unlatch. Therefore, when the jumper was removed, the open IA trip valve closed as designed. This event is reportable pursuant to 10CFR50.73 (a)(2)(iv) as an automatic actuation of an Engineered Safety Feature. A four hour report was made pursuant to 10CFR50.72 (b)(2)(ii).

The cause of the event was the failure of the SSPS slave relay to reset when the CDA and Phase B isolation signals were reset. As an immediate corrective action, the jumper was re-installed across the relay, and the IA trip valve was reopened. After manually resetting the relay, the jumper was removed.

No significant safety consequences resulted from this event because the relay latch failed in the safety mode of operation. Operational consequences were minimal because prompt corrective actions resulted in the IA flow path into containment being re-established within two minutes. The health and safety of the public was not affected at any time during this event.

NRC FORM 366A
(6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
North Anna Power Station Unit 1	0 5 0 0 0 3 3 8	9 2	— 0 0 6	— 0 0	0 2 OF 0 3

TEXT (if more space is required, use additional NRC Form 366A's) (17)

1.0   Description of the Event

On February 29, 1992, at 0210 hours, Unit 2 was in Mode 5 operating on the Residual Heat Removal System (EIIS System Identifier BP) with the Containment Depressurization Actuation (CDA) Functional Test in progress. Electricians in the field were in the process of removing a jumper, which was installed per the test procedure, that bypassed the CDA Solid State Protection System (SSPS)(EIIS System Identifier JC) slave relay (Component Identifier RLY) contacts which open to close the containment Instrument Air (IA) valves (EIIS System Identifier LD, Component Identifier ISV). Although the CDA and Phase B isolation signals had been reset following the test, the protection relay that controls the IA trip valve failed to unlatch. Therefore, when the jumper was removed, the IA trip valve closed as designed. This event is reportable pursuant to 10CFR50.73 (a)(2)(iv) as an automatic actuation of an Engineered Safety Feature. A four hour report was made pursuant to 10CFR50.72 (b)(2)(ii).

2.0   Significant Safety Consequences and Implications

No significant safety consequences resulted from this event because the relay latch failed in the safety mode of operation. Operational consequences were minimal because prompt corrective actions resulted in the IA flow path into containment being re-established within two minutes. IA pressure inside containment decreased to 40 psig (with one containment IA compressor running) from a normal value of 90 psig, but no valves inside containment moved from their normal position. In addition, the subject relay successfully performed its safety function during the CDA test. 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 was the failure of the K619 SSPS slave relay latch mechanism to unlatch the relay (Vendor W120, Type AR) during the CDA Functional Test (2-PT-66.3) when the CDA and Phase B Isolation signals were reset. When the jumper was removed from the K619 relay contacts, the solenoid operated valve which opens the IA trip valve was de-energized causing the IA trip valve to close.

The cause of the latching mechanism failing to reset the relay has not been determined.

4.0   Immediate Corrective Actions

The jumper was re-installed across the relay, and the the IA trip valve was re-opened within two minutes. Operators in the Control Room observed that containment IA pressure had decreased to 40 psig from a normal value of 90 psig, but no valves inside containment moved from their normal position. After manually resetting the relay, the jumper was removed.

NRC FORM 366A
(6-89)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

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)	DOCKET NUMBER (2)	LER NUMBER (6)					PAGE (3)		
		YEAR		SEQUENTIAL NUMBER		REVISION NUMBER			
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

5.0 Additional Corrective Actions

A Work Order was submitted to inspect and repair or replace the relay as required.

An Engineering Work Request was submitted to investigate possible replacement relays.

6.0 Actions to Prevent Recurrence

The CDA Functional Test procedures for both units will be revised prior to their next performance to add steps to verify all relays are reset before jumpers are removed.

An evaluation will be performed to determine if the reliability of the SSPS latch mechanism reset function can be improved. This evaluation will consider information obtained from the following similar events:

7.0 Similar Events

DR 92-0615 documents a failure of the Unit 2 K608 relay to reset during the SI functional test on March 3, 1992.

DR 89-0383 Unit 2 K608 relay failed to reset during SI functional test on March 2, 1989.

DR 89-0382 Unit 2 K604 relay failed to reset during SI functional test on March 2, 1989.

DR 89-0381 documents a failure of relays K604, K608, K618 and K647 to reset during the SI functional test on March 2, 1989.

DR 89-0377 Unit 2 K619 relay failed to reset during CDA functional test on March 1, 1989.

DR 87-0952 documents a failure of "B" train SSPS relays K608 and K610 to reset following the SI functional test. The suspect cause was dirty contacts.

DR 82-0340 documents the failure of the K608 relay to reset on May 29, 1982.

DRs 82-0097 and 82-0098 document failures of the K610, K608 and K645 relays to reset following the CDA and SI functional tests on March 8 and March 11, 1982, respectively.

LER N2-80-092 documents failure of relays K603, K604 and K611 to reset following the performance of an SI functional test. The cause was determined to be failure of the ARLA type 4993D05G06 latching mechanism to delatch due to binding.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

8.0   Additional Information

North Anna Unit 1 was in Mode 5 throughout this event and was not affected.