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VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION

P. O. BOX 402

MINERAL, VIRGINIA 23117

10 CFR 50.73

February 12, 1992

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

Serial No. N-92-05
NAPS:WCH
Docket Nos. 50-338
License Nos. NPF-4

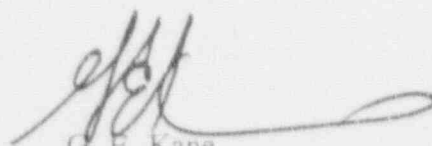
Dear Sirs:

The Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Unit 1.

Report No. 50-338/92-005-00

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: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-650), 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 1

DOCKET NUMBER (2)

05000338 1 OF 04

TITLE (4)

EMERGENCY DIESEL GENERATOR LOAD SEQUENCING TIMER SETPOINT DRIFT

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 NAMED	DOCKET NUMBER(S)
0	1	1	3	9	2	9	2	0	0	5
0	1	1	3	9	2	9	2	0	0	5
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50. (Check one or more of the following): (11)							
5			20.402(b) 20.405(c) 50.73(a)(2)(iv) 73.71(b)							
POWER LEVEL (10)			20.405(a)(1)(i) 50.36(c)(1) 50.73(a)(2)(v) 73.71(c)							
0 0 0			20.405(a)(1)(ii) 50.36(c)(2) 50.73(a)(2)(vi) OTHER (Specify in Abstract and on Form NRC Form 306A)							
			20.405(a)(1)(iii) 50.73(a)(2)(i) 50.73(a)(2)(vii)(A) 50.73(a)(2)(vii)(B)							
			20.405(a)(1)(iv) 50.73(a)(2)(ii) 50.73(a)(2)(viii)(B) 50.73(a)(2)(ix)							
			20.405(a)(1)(v) 50.73(a)(2)(iii) 50.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)

NAME

G. E. Kane, Station Manager

TELEPHONE NUMBER

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	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC
X	E	K	T	M	R				
			A	1	0	9	Y		

SUPPLEMENTAL REPORT EXPECTED (14)

YES (if yes, complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	<input checked="" type="checkbox"/>				

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

On January 13, 1992, with Unit 1 in cold shutdown (Mode 5), it was determined during Emergency Diesel Generator (EDG) load sequencing timer testing that four timers had drifted outside their setpoint tolerance listed under Technical Specification (TS) Table 4.8-1. Since this condition was prohibited by the TS, this event is reportable pursuant to 10CFR50.73 (a) (2) (i) (B).

The probable cause of the event is setpoint drift. As an immediate corrective action, each timer was reset and successfully retested.

Engineering performed an evaluation to review the impact that the setpoint drift of each affected timer would have on the operation of the EDG load sequencing scheme and determined that no significant safety consequences resulted from this event. Each fan started by the timers trips on a CDA signal and does not cause an EDG concern; therefore, the health and safety of the public was not affected at any time due to this event.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 80.0 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 1	DOCKET NUMBER (2) 05000338	LER NUMBER (6)			PAGE (3)		
		YEAR 92	SEQUENTIAL NUMBER 005	REVISION NUMBER 00			

TEXT (if more space is required, use additional NRC Form 360A's) (17)

1.0 Description of the Event

On January 13, 1992, with Unit 1 in cold shutdown (Mode 5), it was determined during Emergency Diesel Generator (EDG) (EIIS System Identifier EK, Component Identifier DG) load sequencing timer (Component Identifier TMR, Vendor A109, Model Numbers 7012AD, and 7012PE) testing that four timers had drifted outside their setpoint tolerance band listed under Technical Specification (TS) Table 4.8-1. Three timers were associated with Control Rod Drive Mechanism (CRDM) cooling fans (EIIS CD-FAN), and the other was for a containment air recirculation fan (EIIS BK-FAN). Since this condition was prohibited by the TS, this event is reportable pursuant to 10CFR50.73 (a) (2) (i) (B).

Timer 1HVRA04-62 was found outside its specified range of 9.5 to 10.5 seconds at 10.86 seconds. This timer prevents restart of 1-HV-F-37A (CRDM Cooling Fan) for 10 seconds to ensure sufficient margin exists to allow the diesel to increase back to rated speed prior to the next load block. During a Loss Of Off-site Power (LOOP)/Safety Injection (SI) condition, the next load block is the Auxiliary Feedwater (AFW) pump (EIIS BA-P) at 20 seconds and during a LOOP condition the next load block is the Component Cooling (CC) pump (EIIS CC-P) at 15 seconds. Although the timer setpoint was found greater than the TS tolerance limit, sufficient margin still existed to ensure EDG operability at the next load block. In addition, this fan trips on a Containment Depressurization Actuation (CDA) signal and therefore does not cause an EDG concern.

Timer 1HVRP04-62 was found outside its specified range of 9.5 to 10.5 seconds at 8.61 seconds. This timer prevents restart of 1-HV-F-37F (CRDM Cooling Fan) for 10 seconds to ensure sufficient margin exists to allow the diesel to increase to rated speed during the initial load block. Equipment in the initial load block during LOOP/SI or LOOP starts prior to this 10 second load block. Although the timer setpoint was found less than the TS tolerance limit, sufficient margin still existed to ensure EDG operability at the 10 second load block. In addition, this fan trips on a CDA signal and therefore does not cause an EDG concern.

Timer 1HVRE04-62 was found outside its specified range of 9.5 to 10.5 seconds at 10.89 seconds. This timer prevents restart of 1-HV-F-37E (CRDM Cooling Fan) for 10 seconds to ensure sufficient margin exists to allow the diesel to increase back to rated speed prior to the next load block. Although the timer setpoint was found greater than the TS tolerance limit, sufficient margin still existed to ensure EDG operability at the next load block. During a Loss Of Off-site Power (LOOP)/Safety Injection (SI) condition, the next load block is the AFW pump (EIIS BA-P) at 20 seconds and during a LOOP condition the next load block is the CC pump (EIIS CC-P) at 15 seconds. In addition, this fan trips on a Containment Depressurization Actuation (CDA) signal and therefore does not cause an EDG concern.

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 (9150-0104), 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	050000338	92	005	00	03	OF 04

TEXT (If more space is required, use additional NRC Form 360A's) (17)

1.0 Description of the Event (continued)

Timer 1HVREU3-62 was found outside its specified range of 28.5 to 31.5 seconds at 28.15 seconds. The design function of this timer is to prevent restart of 1-HV-F-1B (Containment Air Recirculation Fan) for 30 seconds. This fan circuitry was previously modified which resulted in requiring a manual restart of this fan once tripped. Therefore, the timer plays an insignificant role and only prevents the manual restart of the fan for the duration of the setting (30 second) after the re-energization of the emergency bus. In addition, this fan trips on a LOOP or CDA signal and therefore does not cause an EDG concern.

2.0 Significant Safety Consequences and Implications

The EDG load sequencing scheme is provided to ensure the EDGs have sufficient time to recover to rated speed following the start of safety equipment in the previous load block. Load sequencing timers are set in accordance with TS requirements to start equipment at appropriate times with respect to their load block. Engineering performed an evaluation to review the impact that the setpoint drift of each affected timer would have on the operation of the EDG load sequencing scheme and determined that no significant safety consequences resulted from this event. In addition, each fan started by the timers trips on a CDA signal and does not cause an EDG concern; therefore, the health and safety of the public was not affected at any time due to this event.

3.0 Cause of the Event

The probable cause of the event is setpoint drift.

4.0 Immediate Corrective Actions

The timers were reset and successfully tested within their TS tolerance limits.

5.0 Additional Corrective Actions

Additional Unit 1 EDG Load sequencing timers were successfully tested and the remaining timers will be tested as they become available prior to startup.

6.0 Actions to Prevent Recurrence

An Engineering evaluation is being performed to determine the cause of the timer setpoint drift. Corrective actions will be implemented as required based on the results of the evaluation.

During the upcoming Unit 2 refueling outage, the EDG Load Sequencing Timer Verification Test will be performed to ensure no other timers are outside their tolerance limit.

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 1	DOCKET NUMBER (2) 05000338	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		92	005	00	04	OF 04

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

7.0 Similar Events

LER N1/2-91-018-00 documents a failure to perform time response testing on the 72% undervoltage relays and associated time delay settings outside TS requirements.

LER N2-91-005-00 documents a degraded voltage relay time delay setting outside its TS tolerance limit.

8.0 Additional Information

During the summer of 1991, the NRC conducted an Electrical Distribution System Functional Inspection at North Anna Power Station. On December 18, 1991, Inspection Report 50-338,339/91-17 was received which identified a violation which is similar to the event reported in this LER. The Notice of Violation stated that EDG load sequencing timer drift was identified on Unit 2 on August 7, 1989, and subsequently identified on Unit 1 in 1991. The violation was issued because measures were not taken to determine the cause of the condition and preclude repetition. In response to this violation, North Anna committed to performing the EDG Load Sequencing Timer Verification Test on Unit 1 during the current outage. The timer setpoint drift documented in this LER was identified during that test. The current Engineering evaluation being performed will determine the cause of the condition and suggest actions to preclude repetition.

Unit 2 was operating in Mode 1 when the deviation was discovered and was not affected by this event.