

Virginia Electric and Power Company
North Anna Power Station
P. O. Box 402
Mineral, Virginia 23117

October 4, 1993

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

NAPS:AML
Docket No. 50-339
License No. NPF-7

Dear Sirs:

Pursuant to North Anna Power Station Technical Specifications, Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Unit 2.

Report No. 50-339/93-005-00

This Report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to the 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

NRC Senior Resident Inspector
North Anna Power Station

080033

IED2
11

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION
COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN
ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB
7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001,
AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF
MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) North Anna Unit 2		DOCKET NUMBER (2) 05000 339	PAGE (3) 1 OF 3
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TITLE (4) Emergency Diesel Generator Load Sequencing Timers Outside Setpoint Tolerance			
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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)
09	09	93	93	005	00	10	04	93		05000
										05000

OPERATING MODE (9) 5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (%) 0%	20.402(b)	20.405(b)	50.73(a)(2)(iv)	73.71(b)						
	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)(vi)	OTHER						
	20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	50.73(a)(2)(vii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)						
	20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(vii)(B)							
20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)								

LICENSEE CONTACT FOR THIS LER (12)

NAME G.E.Kane, Station Manager	TELEPHONE NUMBER (include Area Code) (703) 894-2101
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS
X	EK	TMR	A109	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

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

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On September 9, 1993 at 1340 hours, with Unit 2 in cold shutdown (Mode 5), during Emergency Diesel Generator (EDG) load sequencing timer testing, the "3A" Auxiliary Feedwater Pump timer was found outside its setpoint tolerance as specified in Technical Specification (TS) Table 4.8-1. The timer was reset and successfully re-tested. On September 20, 1993 at 1125 hours, with Unit 2 in Refueling (Mode 6), during EDG load sequencing timer testing, a timer associated with a Control Rod Drive Mechanism (CRDM) cooling fan was found outside of its setpoint tolerance listed in TS Table 4.8-1. The timer was reset and successfully re-tested. This event is reportable pursuant to 10 CFR 50.73 (a) (2) (i) (B) for a condition prohibited by the Technical Specifications.

The cause of the event was setpoint drift of the Agastat 2400/7000 series timer relays.

Engineering performed an evaluation to determine the impact of the timer setpoint drift. The evaluation determined that there would be no impact on the operation of the EDG load sequencing scheme. Therefore, the health and safety of the public were not affected at any time.

REQUIRED NUMBER OF DIGITS/CHARACTERS
FOR EACH BLOCK

BLOCK NUMBER	NUMBER DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 - FACILITY NAME 8 TOTAL - DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

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 INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (8)			PAGE (3)
North Anna Unit 2	05000 339	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		93	— 005 —	00	

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

1.0 Description of the Event

On September 9, 1993 at 1340 hours, with Unit 2 in cold shutdown (Mode 5), during Emergency Diesel Generator (EDG) load sequencing timer (EIIS System Identifier EK, Component Identifier TMR, Vendor ID A109) testing (EIIS TMR, Vendor A109), the "3A" motor driven Auxiliary Feedwater (AFW) pump (EIIS BA-P) timer (EIIS TMR, Vendor A109) was found outside its setpoint tolerance as specified in Technical Specification (TS) Table 4.8-1. The timer was reset and successfully re-tested. On September 20, 1993 at 1125 hours, with Unit 2 in Refueling (Mode 6), during EDG load sequencing timer testing, a timer associated with a Control Rod Drive Mechanism (CRDM) cooling fan (EIIS CD-FAN) was found outside of its setpoint tolerance listed in TS Table 4.8-1. The timer was reset and successfully re-tested. This event is reportable pursuant to 10 CFR 50.73 (a) (2) (i) (B) for a condition prohibited by the Technical Specifications.

Timer 2FWEA01-62 for the "3A" AFW pump was found outside its setpoint tolerance of 19.00 to 21.00 seconds at 21.07 seconds. This timer is designed to prevent the restart of the AFW pump 2-FW-P-3A for 20 seconds.

Timer 2HVRD04-62 for the "D" CRDM fan was found outside its setpoint tolerance of 9.5 to 10.5 seconds at 9.16 seconds. This timer is designed to prevent the restart of the CRDM cooling fan 2-HV-F-37D for 10 seconds.

Each timer prevents restart of its associated equipment to ensure that sufficient margin exists to allow the EDG to achieve rated speed during the subsequent load block.

2.0 Significant Safety Consequences and Implications

The EDG load sequencing system is provided to ensure that the EDGs have sufficient time to recover to rated speed following the start of safety equipment during the previous load block. Engineering performed an evaluation to determine the impact of the timer setpoint drift. The evaluation determined that there would be no impact on the operation of the EDG load sequencing scheme. Therefore, there were no significant safety consequences resulting from this event, and the health and safety of the public were not affected at any time.

3.0 Cause of the Event

The cause of the event was setpoint drift of the Agastat 2400/7000 series timer relays.

4.0 Immediate Corrective Actions

The timers were reset and successfully re-tested within TS limits.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
North Anna Unit 2	05000 339	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		93	— 005 —	00	

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

5.0 Additional Corrective Actions

A program was established in Licensee Event Report (LER) 05-338/92-005-00 to systematically replace the Agastat 2400/7000 series timer relays with Allen-Bradley RTC solid state timers on a priority basis. During the current Unit 2 refueling outage, two relays will be replaced on the 2H bus and three relays will be replaced on the 2J bus. Future timer replacements will be evaluated on a case by case basis.

5.0 Actions to Prevent Recurrence

The replacement of the Agastat 2400/7000 series timer relays with Allen-Bradley RTC solid state timers will eliminate the setpoint drift problem.

7.0 Similar Events

LER 50-338/93-003-01 documents EDG load sequencing timers found outside their TS specified setpoint tolerances.

LER 50-339/92-004-00 documents EDG load sequencing timers found outside their setpoint tolerances as specified in TS.

LER 50-338/92-005-00 documents EDG load sequencing timers setpoint drift outside of TS limits.

LER 50-338,339/91-018-00 documents a failure to perform time response testing on the 72% undervoltage relays and associated timer relay settings outside TS requirements.

LER 50-339/91-005-00 documents a degraded voltage timer relay setting outside its TS tolerance limit.

8.0 Additional Information

Unit 1 was operating at 100% power (Mode 1) and was not affected during the event.

Unit 2 was shut down on September 7, 1993 for a scheduled refueling outage.