

LICENSEE EVENT REPORT

CONTROL BLOCK: 1

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 VANASI200-06000-00341111145

CON'T

01 L6050003387017247980806799

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES 10

02 | On July 24, 1979, Vepco Instrument Department discovered that it is possible for the |
03 | 7300 series signal comparator (NAL) cards to fail causing the associated bistable to |
04 | possibly fail in a non -conservative direction. Past NAL card failures were all found |
05 | by the performance of a procedure and were at that time modified with an upgraded I.C. |
06 | As a result, the public health and safety were not affected. Reportable pursuant to |
07 | T.S. 6.9.1.8.i. |

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0 9	SYSTEM CODE 1 A 11	CAUSE CODE B 12	CAUSE SUBCODE A 13	COMPONENT CODE I N S T R U 14	COMP. SUBCODE C 15	VALVE SUBCODE Z 16
	EVENT YEAR 7 9	SEQUENTIAL REPORT NO. 0 9 1	OCCURRENCE CODE 1 1	REPORT TYPE I	REVISION NO. 0	
17	LER RO REPORT NUMBER 7 9	SHUTDOWN METHOD Z 21	HOURS 0 0 0 0	ATTACHMENT SUBMITTED V 23	NPRD-4 FORM SUB. N 24	PRIME COMP. SUPPLIER N 25
	ACTION TAKEN X 18	FUTURE ACTION A 19	EFFECT ON PLANT Z 20	COMPONENT MANUFACTURER W 1 2 0 26		

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS 27

10 | The cause of the failures is that component W -104 (Dual Peripheral Driver and |
11 | 2NPN Output Transistors) on the NAL Card has the tendency to fail in a shorted condi- |
12 | tion thereby preventing the bistable from performing its intended function. The Vepco |
13 | Instrument Department initiated a review of the history of NAL Card failures to |
14 | determine the corrective actions to be taken. |

15 E28 10029 NA 30 A31 Investigation by Instrument Dept. 32

16 Z33 Z34 NA 35 608 313 36

17 00037 Z38 NA 39

18 00040 NA 41

19 742 NA 43

20 N44 NA 45 7908130459 NRC USE ONLY

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Virginia Electric and Power Company
North Anna Power Station, Unit #1
Docket No. 50-338
Report No. LER 79-091/OIT-0

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Description of Event

On July 24, 1979, the Vepco Instrument Department discovered that it is possible for the 7300 series process NAL cards to fail causing the associated bistable to possibly fail in an unsafe direction.

Probable Consequences of Occurrence

The consequences of this event were limited because all past NAL card failures were discovered during the performance of a procedure and were, at the time of discovery, modified with an upgraded integrated circuit. Also, review shows that of all the failures that are Tech. Spec. related, only one loop failed for any given surveillance date thus ensuring that at least the minimum number of redundant protection channels were still operable to provide for the safe operation of the Unit. There have been no NAL card failures since February of this year. As a result the health and safety of the general public were not affected by this occurrence. Unit 2 uses identical process cards in its protection system and is similarly affected.

Cause

The cause of the NAL card failures is that card component W-104, consisting of a dual peripheral driver and two NPN output transistors, may fail in a shorted condition thereby preventing the bistable from performing its intended function.

Immediate Corrective Action

The Vepco Instrument Department initiated a review of the history of NAL card failures to determine the extent of the problem and the corrective actions to be taken.

Scheduled Corrective Actions

During the scheduled periodic surveillances for the month of August all NAL cards in Reactor Protection Circuits and Engineered Safeguards Circuits will be inspected to determine if the cards contain the W-104 component. Any defective NAL cards will be replaced immediately. Other NAL cards with W104 components will be replaced as soon as upgraded components are available.

Actions Taken To Prevent Recurrence

Replacing the W-104 component with an upgraded integrated circuit as described in the Scheduled Corrective Actions will prevent recurrence of the problem.

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