

LICENSEE EVENT REPORT

CONTROL BLOCK: 1

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

01 VANASI200-06000-00341111145

CON'T 01 REPORT SOURCE 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.

09 SYSTEM CODE 1A11 CAUSE CODE B12 CAUSE SUBCODE A13 COMPONENT CODE INSTRU14 COMP. SUBCODE C15 VALVE SUBCODE Z16
17 LER RO REPORT NUMBER 79 EVENT YEAR 19 SEQUENTIAL REPORT NO. 091 OCCURRENCE CODE 11 REPORT TYPE I REVISION NO. 0
ACTION TAKEN X18 FUTURE ACTION A19 EFFECT ON PLANT Z20 SHUTDOWN METHOD Z21 HOURS 0000 ATTACHMENT SUBMITTED V23 NPRD-4 FORM SUB. N24 PRIME COMP. SUPPLIER N25 COMPONENT MANUFACTURER W12026

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 FACILITY STATUS E28 % POWER 10029 OTHER STATUS NA METHOD OF DISCOVERY A31 DISCOVERY DESCRIPTION Investigation by Instrument Dept.
16 ACTIVITY CONTENT Z33 RELEASED Z34 AMOUNT OF ACTIVITY NA LOCATION OF RELEASE 608 313
17 PERSONNEL EXPOSURES NUMBER 00037 TYPE Z38 DESCRIPTION NA
18 PERSONNEL INJURIES NUMBER 00040 DESCRIPTION NA
19 LOSS OF OR DAMAGE TO FACILITY TYPE Z42 DESCRIPTION NA
20 PUBLICITY ISSUED N44 DESCRIPTION NA

7 908 130 459

NRC USE ONLY

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

Attachment: Page 1 of 1

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.

608 314