

## LICENSEE EVENT REPORT

CONTROL BLOCK: 1 (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 V A N A S 1 2 0 0 - 0 0 0 0 0 - 0 0 3 4 1 1 1 1 4 5  
7 8 9 LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 37 CAT 58

CON'T

0 1 L 6 0 5 0 0 0 3 3 8 7 0 7 2 0 7 1 9 8 0 18 0 2 7 1 9 9  
7 8 9 REPORT SOURCE 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

## EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On July 20, 1979, Vepco Instrument Department discovered that it is possible for pro-  
0 3 cess cards, types NMB, NVP and NCB, to fail causing adverse effects on the associated  
0 4 loop actions. Because the failures are either in a conservative direction or have  
0 5 redundant backup protection, the health and safety of the general public were not  
0 6 affected by this event. Reportable pursuant to T.S. 6.9.1.8.i.

0 7  
0 8

0 9 SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP. SUBCODE VALVE SUBCODE  
1 A 11 B 12 A 13 INSTRU 14 C 15 Z 16  
7 8 9 10 11 12 13 14 15 16 17 18 19 20  
17 LER NO. REPORT NUMBER 21 22 23 24 25 26 27 28 29 30 31 32  
0 7 9 0 8 9 0 1 T 0  
ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NPRD-4 FORM SUB PRIME COMP. SUPPLIER COMPONENT MANUFACTURER  
X 18 C 19 Z 20 Z 21 0 0 0 0 Y 23 N 24 N 25 V 26 27 28 29 30 31 32  
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47

## CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The cause for the failures is the component layout on the cards. Because of this  
1 1 layout, it is possible for components to short to ground. The Vepco Instrument Depart-  
1 2 ment has performed a Process Card Failure Analysis for each card in question to deter-  
1 3 mine the effects of its failure on protection loops.

1 4  
1 5 FACILITY STATUS 28 1 0 0 29 OTHER STATUS 30 NA METHOD OF DISCOVERY 31 Investigation by Instrument Dept. DISCOVERY DESCRIPTION 32  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 6 RELEASED OF RELEASE 33 2 34 NA AMOUNT OF ACTIVITY 35 NA LOCATION OF RELEASE 36  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 7 PERSONNEL EXPOSURES 37 0 0 0 38 Z 39 NA 519 358  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 8 PERSONNEL INJURIES 40 0 0 0 41 NA 583  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 9 LOSS OF OR DAMAGE TO FACILITY 42 2 43 NA 7908070  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

2 0 PUBLICITY 44 N 45 NA  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

FOUR ORIGINAL

NRC USE ONLY

Virginia Electric and Power Company  
North Anna Power Station, Unit #1  
Docket No. 50-338  
Report No. LER 79-089/OIT-0

Attachment, page 1 of 1

#### Description of Event

On July 20, 1979, the Vepco Instrument Department discovered that it is possible for its process cards, types NMD, NVP and NCB, to fail causing adverse effects on the associated loop actions.

#### Probable Consequences of Occurrence

The consequences of this event were limited because analysis revealed that all possible failures are in the conservative direction with the exception of feedwater flow. The Steam/Feedwater Flow Mismatch in coincidence with a Steam Generator Low Water Level trip is not used in the transient and accident analyses but is included in the Technical Specifications to insure the functional capability of the specified trip settings and thereby enhance the overall reliability of the Reactor Protection System. This trip is redundant to the Steam Generator Water Level Low-Low trip. 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 for the possible card failures is the layout of the components on the cards. Because of this layout, it is possible for components to short electrically to ground. A similar problem was encountered with one lead/lag card in Unit 2's protection system ( $\Delta T$ /TAVG circuitry) on June 25, 1979.

#### Immediate Corrective Action

The Vepco Instrument Department performed a Process Card Failure Analysis for each card in question to determine the exact effects of its failure on protection loops.

#### Scheduled Corrective Action

The defective process cards will be replaced by newer models with proper component layout when they become available.

#### Actions Taken To Prevent Recurrence

No further actions required.

519 359

LER:E2