

# LICENSEE EVENT REPORT

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

01 VANAS1 200-000000-00 341111 4 5  
7 8 9 14 15 25 26 30 57 CAT 58

CON'T  
01 L 605000338 7092379 8101979 9  
7 8 60 61 68 69 74 75 80

## EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 On 9-23-79, during a power escalation, a quadrant power tilt in excess of 1.02  
03 occurred for 25 minutes. The maximum tilt was 1.0215 measured by the upper  
04 detectors. This event is contrary to T.S. 3.2.4. The tilt was restored to less than  
05 1.02 within the 2 hour time limit of Action Statement a.2.  
06 This event is reportable as per T.S. 6.9.1.9.b.  
07  
08

09 R C 11 X 12 X 13 Z Z Z Z Z 14 Z 15 Z 16  
7 8 9 10 11 12 13 14 15 16 17 18 19 20  
17 7 9 1 2 7 0 3 L 0  
21 22 23 24 25 26 27 28 29 30 31 32  
ACTION TAKEN X 18 FUTURE ACTION X 19 EFFECT ON PLANT Z 20 SHUTDOWN METHOD Z 21 HOURS 0000 22 ATTACHMENT SUBMITTED Y 23 NPRO-4 FORM SUB. N 24 PRIME COMP. SUPPLIER Z 25 COMPONENT MANUFACTURER Z 9 9 9 26  
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47

## CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

10 The cause of the quadrant power tilt is unknown at this time and is being investigated  
11 by Vepco and Westinghouse. Immediate corrective action was an RCS boration by the  
12 operator which caused a rod withdrawal and restored the tilt to less than 1.02.  
13  
14  
15 F 28 070 29 N/A A 31 Annunciator Alarm 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  
16 Z 33 Z 34 N/A N/A 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  
17 000 37 Z 38 N/A 39  
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  
18 000 40 N/A 41  
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  
19 Z 42 N/A 43  
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  
20 N 44 N/A 45  
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

Virginia Electric and Power Company  
 North Anna Power Station, Unit #1  
 Docket No: 50-338  
 Report No: LER 79-127/03L-0

#### Description of Event

On 9-23-79, during a power escalation, a quadrant power tilt in excess of 1.02 occurred for a 25 minute duration. This event is contrary to T.S. 3.2.4.

The maximum tilt was 1.0215 as measured by the upper detectors and was restored to less than 1.02 within the 2 hour time limit of Action Statement a.2.

This event is reportable as per T.S. 6.9.1.9.b.

#### Probable Consequences of Occurrence

The limit of 1.02 provides DNB and linear heat generation rate protection for X-Y plane power tilts. A period of two hours of operation between 1.02 and 1.09 is allowed by Technical Specifications to allow for problem analysis and correction. A power reduction from 100% is necessary to reinstate the margin of uncertainty for FQ.

There was no effect on the safe operation of the plant as the tilt was reduced to within the limits before the time allowed by the Action Statement expired. At no time was the health and safety of the general public affected.

#### Cause of Occurrence

An evaluation of potential causes of the tilt condition has been performed. Preliminary results from the evaluation ruled out control rod misalignment, burnable poison rod failure, imbalance of loop thermal power, fuel enrichment variations, and calculational errors as being the cause of the tilt condition. The possibility of dropped RCCA rodlets has not been ruled out. Therefore, a detailed safety evaluation to assess continued operation with a few dropped RCCA rodlets was performed. The results of this safety evaluation conclude that there will be no adverse impact on safety from continued operation with the current Technical Specifications limit. Specifically, shutdown margin is adequate, achievable power distribution assumed in the FSAR, and the presence of dropped RCCA rodlets will not result in an inoperable control rod. These results have been discussed with the NRC Division of Nuclear Reactor Regulation.

#### Immediate Corrective Action

After the presence of the tilt was noted, the control room operator initiated an RCS boration which started a withdrawal of control rods and reduced the tilt to within the 1.02 limit.

#### Scheduled Corrective Action

Inspection of the control rods will be performed during the current outage to determine if any dropped rodlets have occurred during the cycle. Vepco and Westinghouse are continuing the investigation into possible causes of quadrant power tilts.

#### Actions Taken to Prevent Recurrence

Further corrective actions will be dependent on the results of the control rod inspections.

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