

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

March 16, 2000

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

Serial No.: 00-111
NAPS: MPW
Docket Nos.: 50-338, 50-339
License Nos.: NPF-4, NPF-7

Dear Sirs:

Pursuant to 10CFR50.73, Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Units 1 & 2.

Report No. 50-338/2000-001-00

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,



W. R. Matthews
Site Vice President

Commitments contained in this letter: None

Enclosure

cc: U. S. Nuclear Regulatory Commission
Region II
Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30303

Mr. M. J. Morgan
NRC Senior Resident Inspector
North Anna Power Station

IE02

LICENSEE EVENT REPORT (LER)

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

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FACILITY NAME (1)

NORTH ANNA POWER STATION , UNIT 1

DOCKET NUMBER (2)

05000338

PAGE (3)

1 OF 4

TITLE (

CONTROL ROD DEVIATION MONITOR INOPERABLE DUE TO PERSONNEL ERROR

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 NAME	DOCUMENT NUMBER
02	21	2000	2000	001	00	03	16	2000	North Anna Unit 2	05000-339
									FACILITY NAME	DOCUMENT NUMBER
										05000-

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)															
		20.2201(b)	20.2203(a)(1)	20.2203(a)(2)(i)	20.2203(a)(2)(ii)	20.2203(a)(2)(iii)	20.2203(a)(2)(iv)	20.2203(a)(3)(i)	20.2203(a)(3)(ii)	50.73(a)(2)(v)	50.73(a)(2)(vi)	50.73(a)(2)(vii)	50.73(a)(2)(viii)	50.73(a)(2)(ix)	73.71	OTHER	
1	77.8%																
																	Specify in Abstract below or in NRC Form 366A

LICENSEE CONTACT FOR THIS LER (12)

NAME

W. R. Matthews, Site Vice President

TELEPHONE NUMBER (Include Area Code)

(540) 894-2101

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)

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

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

On February 21, 2000, at 0755 hours, with Unit 2 in Mode 1 operating at 100% power, the Individual Rod Position Indicator (IRPI) for rod E-5 on shutdown bank "B" drifted high. The Plant Computer System (PCS) rod deviation monitor alarm did not actuate when the IRPI for rod E-5 exceeded 12 steps above the bank demand position of 229 steps. The Technical Specification (TS) action was entered to verify the IRPI was within 12 steps of the bank demand position once every four hours. The IRPI was calibrated and returned to service. Subsequently, it was determined the PCS Rod Position Deviation Monitor would not provide alarm capability above 235 steps. The cause of the event is attributable to personnel error. Test procedures used to implement the PCS TS monitoring function did not ensure the Rod Position Deviation Monitor was operable above 235 steps. The software database has been corrected for both units. This event posed no significant safety implications since the shutdown bank control rods were able to perform their safety function throughout the event and the ability to move control rods was never compromised. This event is reportable pursuant to 10CFR50.73 (a)(2)(i)(B) for a condition prohibited by the TS.

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

1.0 DESCRIPTION OF THE EVENT

North Anna Power Station has two plant process computers (EIS System ID, Component CPU). The first is the PRODAC (P-250), part of the original design installation, and is the primary plant process computer. A second, Plant Computer System (PCS) was subsequently installed to perform certain key functions when the P-250 is not operating properly or removed from service. Although the new PCS is capable of running in parallel with the existing P-250, the Rod Position Annunciator (EIS System AA, Component ALM) is only enabled on one computer at a time.

The position of each shutdown and control rod (EIS System AA, Component ROD) is required to be verified within plus or minus 12 steps of their group step counter (EIS System AA, Component ZI) demand position at least once per twelve hours in accordance with Technical Specification (TS) 3.1.3.2. This activity is accomplished by Operations personnel. Additionally, the P-250 or the PCS Rod Position Deviation Monitor program automatically checks the measured and demanded rod position signals approximately every sixty seconds. The P-250 and the PCS feed an annunciator window and provide a visual printout whenever an individual rod position signal deviates from the step counter demand position in the bank by the preset limit. The P-250 also provides an audible alarm in this situation. The Control Room Operator (CRO) also performs a surveillance to verify rod position once every six hours by comparing the Individual Rod Position Indicator (IRPI) (EIS System AA, Component ZI) against their group step counter demand position.

On February 21, 2000, the PCS was performing the annunciator response monitoring function, as the P-250 computer point that performs the same function was to be removed from service for maintenance. At 0755 hours, on February 21, 2000, the IRPI for rod E-5 on shutdown bank "B" drifted high. The rod deviation monitor alarm did not actuate when the IRPI for rod E-5 exceeded 12 steps above the bank demand position of 229 steps. The TS action was entered to verify the IRPI was within 12 steps of the bank demand position once every four hours. Subsequently, the IRPI was calibrated and returned to service.

Upon further review it was determined that the PCS Rod Position Deviation Monitor program would not alarm above 235 steps. The program was designed, by company Engineering personnel, with a block to ignore any IRPIs greater than 235 steps since it is physically impossible to have an actual rod position that high. With the current shutdown rod bank demand position at 229 steps, the alarm would not actuate with a 12 step deviation above the demand position. This situation renders the Rod Position Deviation Monitor alarm inoperable when control rods are positioned greater than 223 steps.

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

The TS requires an increased surveillance frequency when the Rod Position Deviation Monitor is inoperable. However, with the PCS selected and unable to perform the Rod Position Deviation Monitor function, the four hour TS surveillance requirement action was missed.

2.0 SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS

This event posed no significant safety implications since the shutdown bank control rods were able to perform their safety function throughout the event and the ability to move control rods was not compromised. In addition, the P-250 computer point was still in service and provided indication at the computer to the operators regarding the control rod drift, even though it was not aligned to provide the rod deviation monitor alarm function. Operators increased the surveillance frequency to compare the demand position indicators and the IRPIs upon receiving the P-250 indication. Therefore, the health and safety of the public were not affected at any time during this event.

This condition is reportable pursuant to 10 CFR 50.73 (a)(2)(i)(B) for a condition prohibited by the Technical Specifications.

3.0 CAUSE

The cause of the event is attributable to personnel error as the computer software was programmed to block the signal above 235 steps. Unaware that the design of the PCS Rod Position Deviation Monitor program prevents an annunciator alarm above 235 steps, the LCO action requirement to monitor rod position every four hours was not initiated when the PCS was providing the rod deviation alarm function.

The computer software controlling the Rod Position Deviation Monitor program was developed to identify a 12 step deviation regardless whether it is above or below the demand position. However, to test the annunciator, the test procedures were written to only input a 12 step deviation below the demanded position.

4.0 IMMEDIATE CORRECTIVE ACTION(S)

The TS action was entered to verify the IRPI's for rod E-5 were within twelve steps of the bank demand position once every four hours. Subsequently, the IRPI indicator was recalibrated and returned to service.

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5.0 ADDITIONAL CORRECTIVE ACTIONS

The PCS software database was modified to allow a larger span of steps for the rod deviation alarm. The test procedure was reviewed to ensure the program is tested for all possible cases before it was performed. In addition, the program was tested to alarm on deviations above 235 steps.

A test was performed to ensure the PCS rod deviation alarm would actuate with a 12 step deviation above or below a demand position of 235 steps. The test was completed satisfactorily and the PCS Rod Position Deviation Monitor was declared operable at 1736 hours on February 24, 2000. The TS action was exited at that time.

6.0 ACTIONS TO PREVENT RECURRENCE

Modification to the PCS software database, to allow a larger span of steps, will prevent the PCS Rod Position Deviation Monitor alarm from becoming inoperable with a 12 step deviation above the rod bank demand position of 229 steps.

7.0 SIMILAR EVENTS

LER 50-338/94-004-00 identified a missed surveillance as a result of an inoperable rod deviation monitor. The rod deviation monitor was inoperable as a result of individual rod position computer points being off scan.

8.0 ADDITIONAL INFORMATION

Although the event occurred on Unit 2, it is applicable to Unit 1. The corrective actions taken for Unit 2 were also performed on Unit 1. On February 21, 2000, Unit 1 was at 77.8% power at an end of core life coastdown.