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VIRGINIA ELECTRIC AND POWER COMPANY  
NORTH ANNA POWER STATION  
P. O. BOX 402  
MINERAL, VIRGINIA 23117

10 CFR 50.73

May 14, 1992

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

Serial No. N-92-20  
NAPS:WCH  
Docket Nos. 50-339  
License Nos. NPF-7


Dear Sirs:

The Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Unit 2.

Report No. 50-339/92-013-00

This Report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to the Corporate Management Safety Review Committee for its review.

Very Truly Yours,



G. E. Kane  
Station Manager

Enclosure:

cc: U.S. Nuclear Regulatory Commission  
101 Marietta Street, N.W.  
Suite 2900  
Atlanta, Georgia 30323

Mr. M. S. Lesser  
NRC Senior Resident Inspector  
North Anna Power Station

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) North Anna Power Station Unit 2	DOCKET NUMBER (2) 0501003391	PAGE (3) 1 OF 03
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TITLE (4) Failure To Place Inoperable Overpower Differential Temperature Setpoint Channel In Trip Within One Hour Due to Personnel Errors

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 NAMES	DOCKET NUMBER(S)
04	22	92	92	013	00	05	14	92		0501003391
										0501003391

OPERATING MODE (9) 2

POWER LEVEL (10) 000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11):

20.402(b)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(1)(v)	20.405(a)(2)(i)	20.405(a)(2)(ii)	20.405(a)(2)(iii)	20.405(a)(2)(iv)	20.405(a)(2)(v)	20.405(a)(2)(vi)	20.405(a)(2)(vii)	20.405(a)(2)(viii)	20.405(a)(2)(ix)	50.73(a)(2)(iv)	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(b)	73.71(c)	OTHER (Specify in Abstract)	
						<input checked="" type="checkbox"/>																		

LICENSEE CONTACT FOR THIS LER (12)

NAME: G. E. Kane, Station Manager

TELEPHONE NUMBER: 703 894-2101

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

YES (if you complete EXPECTED SUBMISSION DATE):  NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On April 21, 1992, Unit 2 was in Mode 3 and heating up when the Overpower Differential Temperature (OP DELTA T) Setpoint Channel II (Loop B) indication was documented as being 6% out of tolerance when the 0730 logs were completed. (The required tolerance is ± 4%) The channel remained out of tolerance when the 1330 and 1930 logs were completed. At 2352, Unit 2 entered Mode 2, and criticality was reached at 0038 hours on April 22, 1992. The channel was again logged out of tolerance at 0130 with low power physics testing in progress. The inoperable channel was recognized during the 0730 channel checks on April 22, 1992, and appropriate corrective actions were taken. Technical Specification (TS) 3.3.1.1 Table 3.3-1 allows a mode change from 3 to 2 with an inoperable channel; however, the inoperable channel must be placed in trip within 1 hour after entering Mode 2. Since the channel was not placed in trip within the time limit, this event is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

The cause of the event was cognitive personnel errors by licensed control room operators. Due to oversights by operators performing the channel checks, they did not recognize the condition.

No significant safety consequences resulted from this event because the two other OP DELTA T setpoint channels were working properly. Therefore, the health and safety of the public were not affected at any time during this event.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)  North Anna Power Station Unit 2	DOCKET NUMBER (2)  0500033992	LER NUMBER (6)				PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		92	013	00	03	03	03

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

5.0 Additional Corrective Actions

A Work Order was submitted on 2-RC-TI-2422B "Protection Channel II Differential Temperature Indicator." Subsequently, the Instrumentation Department replaced the channel test card, calibrated the summing amp card and verified the instrument was indicating properly. At 1101 hours, the channel was taken out of trip, and the Action of TS 3.3.1.1 was cleared at 1115.

Operations Department Personnel involved with the event were disciplined by management on their expectations concerning attention to detail when performing channel checks or any other licensed operator responsibilities.

6.0 Actions to Prevent Recurrence

The hand held micro logger computer system was reprogrammed such that the required tolerance check is automatically performed without relying solely on the operator. When out of tolerances between redundant channels is keyed in, the system provides an alarm.

7.0 Similar Events

LER 50-338/85-027-01 documents a Unit 1 shutdown required by TS on December 24, 1985, when Loop "B" DELTA T/Tavg Protection Channel II was declared inoperable with Channel III already in a tripped condition.

LER 50-339/87-015-01 documents a Unit 2 shutdown required by TS on November 4, 1987, when "A" S/G Flow Channel III and "B" S/G Flow Channel IV were declared inoperable. The channels were not placed in trip within 1 hour of the first indication of potential inoperability.

LER 50-339/87-017-00 documents failure to place a nuclear instrument detector channel in trip within 1 hour after entering Mode 2.

DR N91-1608 documents out of tolerance readings between redundant channels of level instrumentation for Unit 1 "C" Safety Injection Accumulator (BP-ACC) on October 24 through 25, 1991. The cause was determined to be an oversight by the operator who failed to recognize the condition. There is no TS which requires this channel to be placed in trip.

8.0 Additional Information

North Anna Unit 1 was in mode 1 throughout this event and was not affected.

The update of the micro logger computer system which incorporated a method to flag out of tolerances between redundant channels was performed in response to IR 50-338,339/91-22 in which inspectors noted a weakness in the computer system. The new software was fully implemented on May 4, 1992.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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FACILITY NAME (1)  North Anna Power Station Unit 2	DOCKET NUMBER (2)  0   5   0   0   0   3   3   9	LER NUMBER (6)				PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISOR NUMBER			
		9   2	-   0   1   3	-   0   0		0   2	OF 0   3

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

1.0 Description of the Event

On April 21, 1992, Unit 2 was in Mode 3 and heating up when the Overpower Differential Temperature (OP DELTA T) Setpoint Channel II (Loop B) (EIIIS System Identifier JC, Component Identifier TDT-CHA) indication was documented as being 6% out of tolerance when the 0730 logs were completed. (The required tolerance is  $\pm 4\%$ ) The channel was still out of tolerance when the 1330 and 1930 logs were completed. At 2352, Unit 2 entered Mode 2, and criticality was reached at 0038 hours on April 22, 1992. The channel was again logged out of tolerance at 0130 with low power physics testing in progress. The inoperable channel was recognized during the 0730 channel checks on April 22, 1992, and the appropriate Abnormal Procedure (AP) was entered at 0745. Technical Specification (TS) 3.3.1.1 Table 3.3-1 allows a mode change from 3 to 2 with an inoperable channel; however, the inoperable channel must be placed in trip within 1 hour after entering Mode 2. Since the channel was not placed in trip within the time limit, this event is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

2.0 Significant Safety Consequences and Implications

The OP DELTA T reactor trip protects the core against excessive linear power density conditions (fuel rod KW/ft). Reactor Coolant System (EIIIS System Identifier AB) average temperature in each loop is included in establishing the OP DELTA T trip setpoints.

No significant safety consequences resulted from this event because the two OP DELTA T setpoint channels in Loops A and C were working properly. Therefore, the health and safety of the public were not affected at any time during this event.

3.0 Cause of the Event

The cause of the event was cognitive personnel errors by licensed control room operators. During completion of 2-LOG-4 "CRO2 Log Readings" using a hand held computer, operations personnel failed to compare the Loop B OP DELTA T setpoint readings to the 4% channel tolerance requirement displayed on the computer. This occurred four consecutive times on April 21 and 22, 1992. Since the channel was not noted as being out of tolerance, the unit startup proceeded without placing the channel in trip as required.

TS Table 3.3-1 "Reactor Trip System Instrumentation," Item 8 specifies that 3 of 3 channels be operable in Modes 1 and 2, and operational modes can be entered with one channel in trip if the provisions contained in the Action requirements are adhered to.

4.0 Immediate Corrective Actions

The Operations Department determined that the channel was out of tolerance at 0745 on April 22, 1992, and Abnormal Procedure 2-AP-3 "Loss of Vital Instrumentation" was immediately entered. At 0804 hours, the channel was successfully placed in trip and the AP was exited.