

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) NORTH ANNA POWER STATION, UNIT 1	DOCKET NUMBER (2) 0 5 0 0 0 3 3 8	PAGE (3) 1 OF 0 2
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TITLE (4)  
REACTOR/TURBINE TRIP, JANUARY 19, 1986

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)
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OPERATING MODE (9) 2	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)									
POWER LEVEL (10) 0104	20.402(b)	20.406(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)					
	20.406(a)(1)(i)	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	73.71(c)					
	20.406(a)(1)(ii)	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)					
	20.406(a)(1)(iii)	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)						
	20.406(a)(1)(iv)	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)						
20.406(a)(1)(v)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME E. Wayne Harrell, Station Manager		AREA CODE 7 1 0 3	NUMBER 8 9 4 - 1 5 1 5 1 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS		

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO					

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

At 0127 hours on January 19, 1986, Unit 1 experienced a turbine/reactor trip from a power level of approximately 4 percent. The trip was caused by a turbine first-stage impulse pressure spike as plant personnel were setting up for a turbine-generator overspeed trip test. Difficulties encountered with the positioning of the Turbine Overspeed Protection Controller keyswitch to the "Overspeed Test" position caused the "Test" position to be momentarily picked up. (The "Test" position sends a "close" signal to the turbine governor and intercept valves). The re-opening of the governor valves caused a first-stage impulse pressure spike which generated a turbine trip signal due to the main generator output breaker being open. The pressure spike also cleared the low power reactor trip blocks and caused the reactor to trip from the turbine trip. The reactor trip response procedure was performed and the plant was stabilized. All primary parameters responded normally for a post trip condition. This event is reportable pursuant to 10 CFR 50.73(a)(2)(iv).

After the plant was stabilized, another key was found to freely move the keyswitch to the "Overspeed Test" position. The reactor was returned to criticality and the Turbine-Generator Overspeed Test was satisfactorily completed. The original key was discarded.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
NORTH ANNA POWER STATION, UNIT 1	0 5   0   0   0   3   3   8	8   6	-   0   0   1	-   0   0	0   2	OF	0   2

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

At 0127 hours on January 19, 1986, Unit 1 experienced a turbine/reactor trip. The turbine was at 1800 rpm in "speed" control on the governor valves (throttle, reheat, and intercept valves fully open). Reactor power was approximately 4 percent. The unit had been brought off-line at 2349 hours on January 18, 1986 in preparation for the performance of a surveillance procedure (1-PT-34.5, Turbine-Generator Overspeed Trip Test).

The trip occurred while Operations personnel were attempting to place the Turbine Overspeed Protection Controller (OPC) keyswitch to the "Overspeed Test" position. (The OPC keyswitch is a three-position switch; "Overspeed Test" position to the right, "In Service" position in the middle, "Test" position to the left). The "Overspeed Test" position disables all OPC protective features in order to allow the turbine speed to be increased to the mechanical trip setpoint. The operators were having difficulty moving the keyswitch to that position and in their efforts the "Test" position of the keyswitch was momentarily picked up. (The "Test" position sends a "close" signal to the governor and intercept valves). When the governor valves pulsed back open to regain turbine speed a turbine first-stage impulse pressure spike occurred. The pressure spike generated a turbine trip signal (15 percent turbine power equivalent first-stage pressure with the main generator output breaker open). The reactor trip system sensed a turbine trip from greater than 10 percent turbine power (first-stage pressure greater than 10 percent power equivalent makes up permissive P-13 which clears the low power reactor trip block permissive P-7, allowing a reactor trip from turbine trip). The reactor trip response procedure was performed and the plant was stabilized. All primary plant parameters responded normally for a post-trip condition. The event is reportable pursuant to 10 CFR 50.73(a)(2)(iv).

While investigating the problem with the Turbine OPC key it was determined that the Steam Generator Wet Layup Interlock key was similar to the OPC key and would actuate the switch to the "Overspeed Test" position. It was also discovered that the serial number on the Wet Layup key matched the serial number on the OPC keyswitch, whereas the serial number on the OPC key did not match the OPC keyswitch serial number. In order to preclude recurrence of this event, the Administrative Key Logbook has been revised to list the Turbine OPC key as having the same Administrative key number as the Steam Generator Wet Layup key. The key that was previously listed as the Turbine OPC key has been discarded. This should ensure proper keyswitch operation when performing future turbine overspeed tests.

The reactor was returned to criticality at 0409 hours on January 19, 1986 and the Overspeed Trip Test was satisfactorily completed at 0550 hours. The unit was back on-line at 0627 hours that morning.

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

February 13, 1986

U. S. Nuclear Regulatory Commission  
Document Control Desk  
016 Phillips Building  
Washington, D.C. 20555

Serial No. N-86-001  
NO/DWR: nih  
Docket No. 50-338

License No. NPF-4

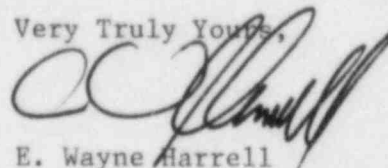
Dear Sirs:

The Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Unit No. 1.

Report No. LER 86-001-00

This report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to Safety Evaluation and Control for their review.

Very Truly Yours,



E. Wayne Harrell  
Station Manager

Enclosures (3 copies)

cc: Dr. J. Nelson Grace, Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region II  
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11