

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		
TITLE (4) Reactor Coolant System High Unidentified Leak Rate																
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)			
0 1	0 9	8 4	8 4	0 0 1	0 0 0	2 0	8 8	4					0 5 0 0 0			
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)														
2		20.402(b)				20.406(e)				80.73(a)(2)(iv)				73.71(b)		
POWER LEVEL (10)		20.406(a)(1)(ii)				80.36(e)(1)				80.73(a)(2)(v)				73.71(c)		
0 0 1		20.406(a)(1)(iii)				80.36(e)(2)				80.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 306A)		
		20.406(a)(1)(iv)				80.73(a)(2)(i)				80.73(a)(2)(viii)(A)						
		20.406(a)(1)(v)				80.73(a)(2)(ii)				80.73(a)(2)(viii)(B)						
		20.406(a)(1)(vi)				80.73(a)(2)(iii)				80.73(a)(2)(ix)						
LICENSEE CONTACT FOR THIS LER (12)																
NAME E. Wayne Harrell										TELEPHONE NUMBER						
										AREA CODE						
										7 1 0 3 8 9 4 1 5 1 5 1						
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs						
X		S G W	1 2 0	Y												
X		S E A L	W 1 2 0	Y												
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)

On January 9, 1984, North Anna Unit 1 was shutdown due to high Reactor Coolant System unidentified leakage. When it was determined that a significant portion of the unidentified leakage was probably primary to secondary leakage through the steam generators, the unit was taken to cold shutdown to examine the steam generators. Pressure leak testing and eddy current examination identified several defective tubes and leaking tube plugs. All tubes were plugged and several leaking plugs were repaired. The steam generator repairs in conjunction with other maintenance performed on the Reactor Coolant System reduced the unidentified leak rate to less than the Technical Specification limit.

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PDR ADOCK 05000338
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
North Anna Power Station, Unit 1	05000338	84	001	00	02	OF	02

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

On January 8, 1984 with Unit 1 at 100% power, the Reactor Coolant System unidentified leak rate could not be calculated with consistent results but appeared to be approaching the Technical Specification upper limit of 1 gpm. Leak rate results were inconsistent because identified leakage was high (5 to 7 gpm) and erratic. This was caused by fluctuating Reactor Coolant Pump seal leakoff due to worn Reactor Coolant Pump seals on 2 Reactor Coolant Pumps. Reactor power was reduced to 1% as a precautionary measure and to allow closer inspection of the Reactor Coolant System. On January 9, 1984, due to the inability to obtain a repeatable calculated leak rate, leakage was assumed to be in excess of 1.0 gpm. An unusual event was declared and the reactor was shut down in accordance with the Action Statement of Technical Specifications. Following reduction of identified leakage, unidentified leakage was estimated to be in the range of 1.25 gpm.

Multiple containment entries were made to continue locating sources of leakage. Walkdowns were also made in the Auxiliary Building of the Charging and Letdown System. Several small leaks were found and repaired. All systems that interfaced with the Reactor Coolant System were checked for possible system to system leakage (such as the Residual Heat Removal, the Component Cooling and the Sampling Systems).

Following repair of all known significant leakage, the Reactor Coolant System was brought to no load operating temperature and pressure with the reactor subcritical. Leakage measurements were performed and determined to be 2.33 gpm unidentified and 1.78 gpm identified. It was determined that the unidentified leakage was primary to secondary leakage since no other leakage paths could be found. The thermal transient imposed on the steam generators during cooldown and heatup is believed to have caused a substantial increase in the primary to secondary leak rate.

During subsequent outage, the "B" and "C" steam generators were leak tested and then eddy current examined in accordance with North Anna Technical Specification surveillance requirements. These initial tests discovered several tubes that were defective and several tube plugs previously installed that had been leaking. All tubes identified as defective were plugged and failed tube plugs were repaired. The steam generators were hydrostatically tested after repairs were made. The retest identified additional leaking tube plugs. These leaks were not considered to be significant enough to require further repairs at this time. A report of the inservice inspection results will be submitted as per T.S. 4.4.5.5. The steam generator repairs in conjunction with other maintenance performed on the Reactor Coolant System reduced the unidentified leak rate to less than the Technical Specification limit. Replacement of the "A" and "B" Reactor Coolant Pump number 2 seals reduced the identified leakage which aided in the determination of unidentified leakage. The "A" steam generator was not tested or examined during the outage since previous chemistry analysis did not indicate primary to secondary leakage in that steam generator.

Vepco

VIRGINIA ELECTRIC AND POWER COMPANY

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NORTH ANNA POWER STATION

P. O. BOX 402

MINERAL, VIRGINIA 23117

February 8, 1984

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 2900
Atlanta, Georgia 30303

Serial No. N-84-002

NO/RST: 11

Docket No. 50-338

License No. NPF-4

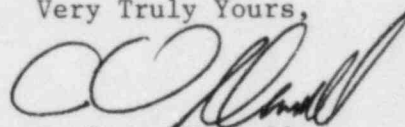
Dear Mr. O'Reilly:

Pursuant to North Anna Power Station Technical Specifications, the Virginia Electric and Power Company hereby submits the following License Event Report applicable to North Anna Unit No. 1.

Report No. LER 84-001-00

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: Document Control Desk (1 copy)
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U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

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