

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) FORCED SHUTDOWN REQUIRED BY TECHNICAL SPECIFICATIONS DUE TO AN INOPERABLE EMERGENCY DIESEL GENERATOR																								
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	9	2	1	8	5	8	5	0	1	1	0	0	1	0	1	6	8	5	0	5	0	0	0	0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)																								
OPERATING MODE (9)		1																						
POWER LEVEL (10)		1 1 0 0																						
		20.402(b)				20.405(c)				50.73(a)(2)(iv)				73.71(b)										
		20.405(a)(1)(i)				50.36(c)(1)				50.73(a)(2)(v)				73.71(c)										
		20.405(a)(1)(ii)				50.36(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)										
		20.405(a)(1)(iii)				X 50.73(a)(2)(i)				50.73(a)(2)(viii)(A)														
		20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)														
		20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)														
LICENSEE CONTACT FOR THIS LER (12)																								
NAME E. Wayne Harrell										TELEPHONE NUMBER AREA CODE 7 10 13 8 1 9 1 4 - 15 1 1 5 1 1														
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																								
CAUSE	SYSTEM	COMPONENT	MANUF- TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUF- TURER	REPORTABLE TO NPRDS														
X	EIK	DIGI 1	C1417 10	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)

At 0716 on September 18, 1985, with Unit 1 at 30% power, the 1J Emergency Diesel Generator (EDG) was removed from service to perform scheduled maintenance. Maintenance was completed and the EDG was started at 2158 on September 18, 1985 to prove operability. At 2250 on September 18, 1985, the 1J EDG tripped on high crankcase pressure.

An investigation determined the high crankcase pressure had been caused by a cracked cylinder liner. The cylinder liner was replaced. In addition, an inspection of the upper and lower pistons determined most of the pistons exhibited wear. All upper and lower pistons were replaced.

Since repairs to the 1J Emergency Diesel Generator could not be completed within the 72 hour time limit specified in the Technical Specifications, a unit rampdown from 100% power was commenced at 0716 on September 21, 1985. A Notification of Unusual Event was declared because of the forced shutdown. This event is reportable pursuant to 10 CFR 50.73 (a)(2)(i)(A).

The unit was placed in Cold Shutdown at 1803 on September 22, 1985. The 1J EDG was declared operable at 2356 on September 22, 1985. The unit was placed on line at 2337 on September 23, 1985.

Throughout this event, two independent offsite power supply circuits were operable and the redundant Emergency Diesel Generator was operable.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 9/31/85

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 5	—	0 1 1	—	0 0	0 2	OF 0 2

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

At 0716 on September 18, 1985, with Unit 1 at 30% power, the 1J Emergency Diesel Generator (EDG) (EIIIS Component Identifier DG) was removed from service to perform scheduled maintenance. At this time, the 72 hour Action Statement of Technical Specification 3.8.1.1 was entered. Maintenance was completed and the EDG was started at 2158 on September 18, 1985 to prove operability. At 2250 on September 18, 1985, the 1J EDG tripped on high crankcase pressure.

An investigation determined the high crankcase pressure had been caused by a cracked number 10 cylinder liner. In preparation for cylinder liner replacement, the number 10 cylinder upper and lower pistons and connecting rods were removed. An inspection revealed both pistons were slightly out of round. This out of round condition was caused by elongation of the piston pin bushing. Elongation of the piston pin bushing caused the piston insert bushing to be pressed against the piston walls, forcing the piston out of round. The out of round piston had produced excessive temperatures and forces in the number 10 cylinder liner which caused it to crack. As a preventive measure, the remaining upper pistons and connecting rods were removed for inspection. Most of the remaining pistons were also out of round. As a result of this inspection, it was decided to replace all upper and lower piston assemblies and connecting rods.

Repairs to the 1J Emergency Diesel Generator could not be completed within the 72 hour time limit of the Action Statement of Technical Specification 3.8.1.1. Therefore, a unit rampdown from 100% power commenced at 0716 on September 21, 1985. At this time a Notification of Unusual Event was declared because of the unit shutdown required by the Technical Specifications. The unit was taken off line at 1237 on September 21, 1985 and placed in Mode 5, Cold Shutdown, at 1803 on September 22, 1985. The Notification of Unusual Event was terminated after the appropriate authorities were notified. This event, completion of a plant shutdown required by the Technical Specifications, is reportable pursuant to 10 CFR 50.73(a)(2)(i)(A).

Throughout this event, two independent offsite power supply circuits were operable and the redundant Emergency Diesel Generator was operable. The Emergency Diesel Generator would not have tripped on high crankcase pressure if it had been running as a result of an emergency start signal. The high crankcase pressure trip is bypassed on an emergency start signal.

Corrective maintenance included the replacement of the number 10 cylinder liner and the replacement of all the upper and lower piston assemblies and connecting rods. A post maintenance run-in period at gradually increased EDG speed and load was performed to seat the new engine parts. An inspection performed after the run-in period found the new components in good condition. The 1J EDG was declared operable at 2356 on September 22, 1985 after successfully meeting its Technical Specification operability requirements.

The reactor was taken critical at 1517 on September 23, 1985 and the unit was placed on line at 2337 on September 23, 1985.

Emergency Diesel Generator failures are described in unit 2 LERs 84-011-02, and 84-013-00. The unit 1 1H EDG experienced a failed cylinder liner on February 4, 1985.



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

October 16, 1985

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

Serial No. N-85-029
NO/JJM: 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 85-011-00

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
pn Station Manager

Enclosures (3 copies)

cc: Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 2900
Atlanta, Georgia 30323

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