NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
NORTH ANNA POWER STATION, UNIT 2	0 5 0 0 0 3 3 9	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 5 0 0 0
1 0	0 8	8 5	8 5	— 0 1 0	— 0 0	1 1	0 7	8 5		0 5 0 0 0

OPERATING MODE (9)	1
POWER LEVEL (10)	1 0 0

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

	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)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
E. WAYNE HARRELL	7 0 3 8 9 4 - 5 1 1 5

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	E K	D G	C 4 7 0	Y							

SUPPLEMENTAL REPORT EXPECTED (14)

		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	YES (If yes, complete EXPECTED SUBMISSION DATE)				
X	NO				

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

At 0630 on October 8, 1985, with Unit 2 at 100% power, the 2H Emergency Diesel Generator (EDG) was removed from service to perform preventative maintenance. Following maintenance, the EDG was started at 0225 on October 10, 1985 to prove operability. Thirty minutes later it tripped on high crankcase pressure. A subsequent inspection determined the cause of the high crankcase pressure to be a cracked upper piston and cylinder liner damage. All upper piston assemblies, and two cylinder liners were replaced. Three of the lower piston assemblies were found acceptable and reused, the others were replaced.

Since repairs to the 2H 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 0630 on October 11, 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).

Unit 2 was placed in Cold Shutdown at 1725 on October 12, 1985. The 2H EDG was declared operable at 2025 on October 14, 1985 and the unit was placed on line at 2148 on October 17, 1985.

IE22
1/1

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
NORTH ANNA POWER STATION, UNIT 2	0 5 0 0 0 3 3 9	8 5	— 0 1 0	— 0 0	0 2 OF 0 2

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

At 0630 on October 8, 1985, with Unit 2 at 100% power, the 2H Emergency Diesel Generator (EDG) (EIIS Component Identifier DG) was removed from service to perform preventative maintenance. In accordance with Technical Specification 3.8.1.1 the 72 hour action statement was entered. At 0225 on October 10, 1985 the EDG was started to prove operability. This was accomplished by using the fast start procedure which simulates an emergency start signal to the EDG. Thirty minutes later the 2H EDG tripped on high crankcase pressure.

Repairs to the 2H 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 0630 on October 11, 1985. At this time a Notification of Unusual Event was declared because of the unit shutdown required by the Technical Specifications. Unit 2 was taken off line at 1140 on October 11, 1985 and placed in Mode 5, Cold Shutdown, at 1725 on October 12, 1985. The notification of Unusual Event was terminated at that time. This event, completion of a plant shutdown required by the Technical Specifications, is reportable pursuant to 10 CFR 50.73(a)(2)(i)(A).

An inspection of the EDG, to determine the cause of the high crankcase pressure, found the #12 cylinder liner scored and the upper piston was cracked with a hole in it. The #11 cylinder liner and upper piston also showed signs of damage. The damage was caused by elongation of the piston pin bushing forcing the insert bushing to press against the piston walls, and distorting the piston skirt.

Corrective measures included replacing all of the upper piston assemblies, the #11 and #12 cylinder liners, and inspecting the lower assemblies. The critical dimensions of all the lower assemblies were found acceptable except for the #12 floating bushing which was worn and subsequently replaced. As a precaution, nine of the lower assemblies were replaced and three assemblies, which showed the least amount of wear, were reused after replacing the piston rings. In addition, the EDG's for Unit 2 are scheduled for a major engine overhaul during the next refueling outage.

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 2H EDG was declared operable at 2025 on October 14, 1985 after successfully meeting its Technical Specification operability requirements.

The reactor was taken critical at 1800 on October 15, 1985 and the unit was placed on line at 2148 on October 17, 1985.

Emergency Diesel Generator failures are described in Unit 2 LERs 84-011-02, and 84-013-00. The Unit 1 1J EDG experienced a similar failure on September 18, 1985, and is described in LER 85-011-00.

Vepco

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

November 7, 1985

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

Serial No. N-85-032
NO/KAH: kbs
Docket No. 50-339

License No. NPF-7

Dear Sirs:

The Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to North Anna Unit No. 2.

Report No. LER 85-010-00

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
101 Marietta Street, Suite 2900
Atlanta, Georgia 30323

IE22
1/1