VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

July 29, 1976

Mr. Norman C. Moseley, Director
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Region II - Suite 818
230 Peachtree Street, Northwest
Atlanta, Georgia 30303

Serial No. 160
PO&M/LJC:jlf

Docket No. 50-280
License No. DPR-32

Dear Mr. Moseley:

Pursuant to Surry Power Station Technical Specification 6.6.B.2, the Virginia Electric and Power Company hereby submits a copy of Licensee Event Report No. USRE-S1-76-07.

The substance of this report has been reviewed by the Station Nuclear Safety and Operating Committee and will be placed on the agenda for the next meeting of the System Nuclear Safety and Operating Committee.

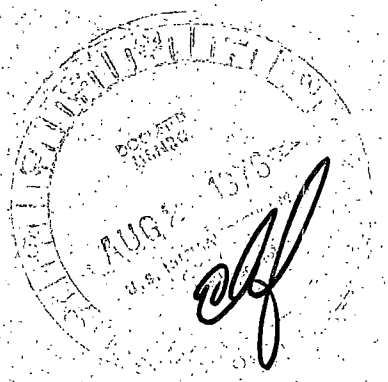
Very truly yours,

C. M. Stallings

C. M. Stallings
Vice President-Power Supply
and Production Operations

Enclosure

cc: Mr. Robert W. Reid, Chief (40 copies)
Operating Reactors Branch 4



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LICENSEE EVENT REPORT

CONTROL BLOCK: [ ] (1–6) (PLEASE PRINT ALL REQUIRED INFORMATION)

LICENSEE NAME	LICENSE NUMBER	LICENSE TYPE	EVENT TYPE
01 VASPS1 (7–8, 9–14)	00-00000-00 (15–25)	4 1 1 1 0 (26–30)	0 3 (31–32)

CON'T	CATEGORY	REPORT TYPE	REPORT SOURCE	DOCKET NUMBER	EVENT DATE	REPORT DATE
01 (7–8)	M I (57–58)	L (59)	L (60)	0 5 0 - 0 2 8 0 (61–68)	0 7 0 2 7 6 (69–74)	0 7 2 7 7 6 (75–80)

EVENT DESCRIPTION

02 During the preparations to run the starting test of #1 emergency diesel generator,water
03 was observed coming out of #19 cylinder. The backup emergency diesel generator was
04 immediately tested satisfactorily and then repairs commenced on #1 emergency diesel
05 generator. The engine was repaired by replacing the cylinder head and head gasket.
06 This is a reportable occurrence in accordance with Technical Specification (Continued)

	SYSTEM CODE	CAUSE CODE	COMPONENT CODE	PRIME COMPONENT SUPPLIER	COMPONENT MANUFACTURER	VIOLATION
07	E E (9–10)	E (11)	E N G I N E (12–17)	A (43)	E 1 4 7 (44–47)	N (48)

CAUSE DESCRIPTION

08 EMD-GM Turbo Vee 20, 3810 Bhp diesel engine was found to have a crack in #19 cylinder
09 head which extended between two exhaust valve seats and into the water jacket. Thus
10 water from the cylinder head water jacket was permitted to drip into the (Continued)

	FACILITY STATUS	% POWER	OTHER STATUS	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION
11	E (9)	1 0 0 (10–12)	N/A (13–44)	B (45)	N/A (46–80)

	FORM OF ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY	LOCATION OF RELEASE
12	Z (9)	Z (10)	N/A (11–44)	N/A (45–80)

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION
13	0 0 0 (9–11)	Z (12)	N/A (13–80)

PERSONNEL INJURIES

	NUMBER	DESCRIPTION
14	0 0 0 (9–11)	N/A (12–80)

OFFSITE CONSEQUENCES

15 N/A

LOSS OR DAMAGE TO FACILITY

	TYPE	DESCRIPTION
16	Z (9)	N/A (10–80)

PUBLICITY

17 N/A

ADDITIONAL FACTORS

18 The backup emergency diesel generator was demonstrated to be operable. Therefore, the
19 safety systems would have functioned if they had been required. (Continued)

NAME: T. L. Baucom PHONE: (804) 357-3184

GPO 881-667

EVENT DESCRIPTION(CONTINUED)

6.6.2b(2). (USRE-S1-76-07).

CAUSE DESCRIPTION (CONTINUED)

cylinder. Rolling the engine with the cylinder test cocks open prior to starting the engine forced the water out of the cylinder. This permitted detection of the problem and prevented further damage to the engine.

This is the fifth cylinder head on this engine to be found with a crack in a time period of approximately three months. Cylinders #1 and #17 were the subject of USRE S1-76-04 and 06. Cylinders #2 and #16 were found during the inspection conducted as a result of USRE S1-76-06. Cylinders #1 and #2 are diametrically opposite of cylinders #16, #17 and #19. This can be indicative of a cylinder head heat stress which is caused by a cylinder heat imbalance or an engine overheat condition.

To ensure the reliability of this engine, the monthly performance test will be conducted on a weekly basis for a period of two months. If no additional cylinder heads are found to be cracked, it will be safe to assume the remaining heads have not been heat stressed to the point of failure. If additional heads are found to be cracked, the determination of the cause of the cracking may be brought to light depending on which head fails.

ADDITIONAL FACTORS (CONTINUED)

Accordingly, no hazard to the safety or health of the general public existed.