U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK / / / / / / / / (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

/0/1/ /V/A/N/A/S/1/ (2) /0/0/-/0/0/0/0/0/-/0/0/ (3) /4/1/1/1/1/ (4) / / / (5)
LICENSEE CODE — LICENSE NUMBER — LICENSE TYPE — CAT

/0/1/ REPORT SOURCE /L/ (6) /0/5/0/0/0/3/3/8/ (7) /0/5/0/7/8/3/ (8) /0/5/2/5/8/3/ (9)
DOCKET NUMBER — EVENT DATE — REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

/0/2/ / On May 7, 1983, with Unit 1 in Mode 1, Inside Containment Recirculation Spray /
/0/3/ / Pump 1-RS-P-1B tripped during surveillance testing. This event is reportable /
/0/4/ / pursuant to T.S. 6.9.1.9.b. Two redundant 50 percent Outside Recirculation Spray/
/0/5/ / Pumps and one redundant 50 percent Inside Recirculation Spray Pump remained oper-/
/0/6/ / able throughout the event. 1-RS-P-1B was satisfactorily tested and returned to /
/0/7/ / service within 31 hours. The Action Statement of the applicable LCO, T.S. /
/0/8/ / 3.6.2.2 was met. The public health and safety were not affected. /

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
/0/9/	/S/B/ (11)	/E/ (12)	/A/ (13)	/C/K/T/B/R/K/ (14)	/A/ (15)	/Z/ (16)

(17)	LER/RO REPORT NUMBER	EVENT YEAR	SEQUENTIAL REPORT NO.	OCCURRENCE CODE	REPORT TYPE	REVISION NO.
		/8/3/	/-/ /0/2/8/	/0/3/	/L/	/-/ /0/

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
/C/ (18)	/Z/ (19)	/Z/ (20)	/Z/ (21)	/0/0/0/ / (22)	/Y/ (23)	/Y/ (24)	/A/ (25)	/I/2/0/2/ (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

/1/0/ / Extensive testing indicated that the B phase overcurrent device in the breaker /
/1/1/ / for 1-RS-P-1B was faulted. After installing a replacement breaker in Unit 1 /
/1/2/ / 1-RS-P-1B breaker cubical, 1-RS-P-1B satisfactorily passed surveillance testing /
/1/3/ / and was returned to service. /
/1/4/ / /

	FACILITY STATUS	%POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
/1/5/	/E/ (28)	/1/0/0/ (29)	/ NA /	/A/ (31)	/ Surveillance Test /

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
/1/6/	/Z/ (33)	/Z/ (34)	/ NA /	/ NA /

	PERSONNEL EXPOSURES NUMBER	TYPE	DESCRIPTION (39)
/1/7/	/0/0/0/ (37)	/Z/ (38)	/ NA /

	PERSONNEL INJURIES NUMBER	DESCRIPTION (41)
/1/8/	/0/0/0/ (40)	/ NA /

	LOSS OF OR DAMAGE TO FACILITY TYPE	DESCRIPTION (43)
/1/9/	/Z/ (42)	/ NA /

	PUBLICITY ISSUED	DESCRIPTION (45)	NRC USE ONLY
/2/0/	/N/ (44)	/ NA /	/ / / / / / / / / / / / / / / /

NAME OF PREPARER E. Wayne Harrell PHONE (703) 894-5151

IE22 1/1

Vepco

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

May 25, 1983

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-83-065
NO/RCS: dus
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.	Applicable Technical Specifications
LER 83-028/03L-0	T.S. 6.9.1.9.b

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
For Station Manager

Enclosures (3 copies)

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

IE22

Description of Event

On 7, 1983, with Unit 1 at 100 percent of Rated Thermal Power, Inside Containment Recirculation Spray Pump 1-RS-P-1B tripped immediately during a start attempt for surveillance testing. This event is reportable pursuant to T.S. 6.9.1.9.b.

Probable Consequences of Occurrence

Two redundant 50 percent Outside Containment Recirculation Spray Pumps and one 50 percent Inside Containment Recirculation Spray Pump remained operable throughout the event. Inside Containment Recirculation Spray Pump 1-RS-P-1B was satisfactorily tested and returned to service within 31 hours after being declared inoperable. The Action Statement of the applicable LCO, T.S. 3.6.2.2, was met. The public health and safety were not affected.

Cause of Event

A similar trip of 1-RS-P-1B occurred on April 7, 1983; however, all electric tests were satisfactory and the problem did not recur during extensive electrical testing and subsequent operability testing. The April 7, 1983 event was reported in LER 83-020/03L-0. The cause of the event could not be determined.

After 1-RS-P-1B tripped on March 7, 1983 during surveillance testing, it was started numerous times. Approximately 50 percent of the starts were successful and approximately 50 percent of the starts resulted in overcurrent trips. Electrical pump motor tests showed that the motor was not grounded, phase resistance was normal, and the all three phases were balanced.

A containment entry was made to check for a pump rub or any other problem that might be detected from observing the pump and motor locally during startup. The pump was rotated by hand and then started. The start and subsequent operation appeared to be normal. The pump was shutdown and restarted to reverify correct pump rotation direction. Correct rotation was verified. However, the pump tripped almost immediately.

The 1-RS-P-1B breaker was replaced with an identical breaker. After four consecutive successful starts of 1-RS-P-1B, three to verify that the replacement breaker eliminated the trip problem and one to satisfy surveillance requirements, 1-RS-P-1B was declared operable.

The suspect breaker was repaired by replacing parts which had been affected by opening numerous times under starting current conditions. The breaker was then throughly inspected and tested in accordance with electrical testing procedures. When the breaker overcurrent trip devices were test at 1500 amps for long time current overload trip times and tested at 7000 amps for instantaneous overload trip times, as specified by procedure, no problems were detected. In an attempt to simulate a pump start (1-RS-P-1B is rated at 300 H.P. which is considered a large load for a 480V breaker) the breaker was tested at 3000 amps. The following time response results were obtained:

Phase	Time To Trip
A	11.49 Sec.
B	0.12
C	13.59

Based on the testing described above, an intermittent fault in the B phase overcurrent device caused the breaker to trip. Electrical tests specify 1500 amps for the long time overcurrent test. This current exceeds the starting current for most devices using 480V breakers; however, the starting current of the Inside Containment Recirculation Spray Pumps may exceed 1500 amps. Because the Inside Containment Recirculation Spray Pump starting currents may exceed 1500 amps, it appears that the standard electrical tests performed on the Inside Recirculation Spray Pump breakers can fail to detect the fault described above. Testing techniques for 480V breakers carrying large loads are being evaluated.

Immediate Corrective Action

As described above, extensive testing indicated that the 1-RS-P-1B motor breaker was faulted. The breaker was replaced and 1-RS-P-1B satisfactorily passed surveillance testing. 1-RS-P-1B was returned to service within 31 hours of being declared inoperable.

Scheduled Corrective Action

Breaker tests for 480V breakers carrying large loads are being evaluated by North Anna electrical personnel. Further corrective actions, if any, will be based on the ongoing evaluation.

Action Taken To Prevent Recurrence

Actions to prevent recurrence, if any, will be based on the evaluation described above.

Generic Implications

Only a single failure of the type described above has been detected. This event does not appear to have generic implications. If the evaluation described above indicates that this event has generic implications, the Commission will be informed by an LER update.