U.S. NUCLEAR REQUILATORY COMMISSION APPROVED OMB NO. 3150-0104 EXPIRES: 8/31/85 LICENSEE EVENT REPORT (LER) DOCKET NUMBER (2) Beaver Valley Power Station, Unit 1 0 |5 | 0 | 0 | 0 | 3 | 3 | 4 | 1 | OF | 0 | Reactor Trip Due To Generator/Turbine Trip LER NUMBER (6) EVENT DATE (6) OTHER FACILITIES INVOLVED (8) REPORT DATE (7) FACILITY NAMES DOCKET NUMBER(S) DAY MONTH DAY N/A 0 | 5 | 0 | 0 | 0 | 8 0 0 0 6 2 2 N/A 4 0 4 0 | 5 | 0 | 0 | 0 | THIS REPORT IS SUBMITTED FURSUANT TO THE REQUIREMENTS OF 10 CFR & (Check one or more of the following) (11) OPERATING 20 402(b) 20 406(c) 50.73(a)(2)(iv) 73.71(b) 20.406(a)(1)(i) 50.73(a)(2)(v) 73,71(c) 50.36(e)(1) OTHER (Specify in Abstract below and in Text, NRC Form 366A) 20.408(a)(1)(H) 50 73(c)(2)(vii) 50 38(e)(2) 20.406(a)(1)(iii) 50.73(a)(2)(viii)(A) 50,73(4)(2)(1) 20.406(e)(1)(iv) 50.73(a)(2)(viii)(8) 50.73(a)(2)(ii) 20.405(a)(1)(v) 50.73(e)(2)(iii) 50.73(a)(2)(x) LICENSEE CONTACT FOR THIS LER (12) NAME TELEPHONE NUMBER AREA CODE Robert J. Druga, Chief Engineer 614131-11121614 COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIPED IN THIS REPORT (13) MANUFAC-CAUSE SYSTEM COMPONENT CAUSE SYSTEM COMPONENT REPORTABLE

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

During normal full nower operation

W11 12 10

SUPPLEMENTAL REPORT EXPECTED (14)

IRIGI

YES (If yes, complete EXPECTED SUBMISSION DATE)

During normal full power operation, the main generator exciter related regulator tripped. At this time, the control room operator noticed that the generator exciter field breaker had also tripped open. The unit experienced an immediate generator trip which initiated a turbine trip and a subsequent reactor trip. All safety related loads automatically transferred to the offsite power system as designed. During this transient, three off normal events occurred. These were the auto start of the #1 Diesel Generator, the 1A and 1C cooling tower pumps tripped off of their respective 4KV busses, and the condenser steam dump valves failed to open in the TAVG mode of control even though a 60% demand signal was observed on the steam dump controller. Immediate manual operator action temporarily resolved the off normal events and the plant was subsequently stabilized in Mode 3 (Hot Standby).

X NO

MONTH

EXPECTED

DAY

YEAR

The initiating cause of the event was a random end of life transistor failure in the generator exciter voltage regulator. This transistor has been replaced. The tripping of the 1A and 1C cooling tower pumps, and the autostart of the #1 Diesel Generator has been attributed to conservative relay setpoints. The applicable relays are currently under investigation by the Electrical Maintenance Group and corrective actions will be initiated as necessary. The failure of the condenser steam dump valves to operate in the TAVG mode was due to dirty contacts on the mode selector switch. These contacts have been subsequently cleaned.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED CMB NO. 3150-0104

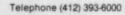
FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6) PAGE (3)
		YEAR SEQUENTIAL REVISION NUMBER
Beaver Valley Power Station, Unit 1	0 5 0 0 0 3 3	4 814 - 01014 - 010 012 OF 0 12

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

At 0239 hours on 5/24/84, during normal full power operation an annunciator alarmed indicating that the main generator exciter voltage regulator had tripped. Control room operators noticed that the generator exciter field breaker had tripped open. The unit experienced an immediate generator trip which initiated a turbine trip and a subsequent reactor trip. The main transformer output breakers opened, and a transfer of loads to the offsite power system occurred. An undervoltage autostart of the #1 diesel generator was initiated as a result of the autobus transfer and the 1A and 1C cooling tower pumpers tripped from their respective 4KV busses, both postulated to have been initiated by conservative protective relay actuations. Misoperation of the steam dump controller occurred in the TAVG mode of control; as a 60% steam dump demand signal on the steam dump controller failed to open the condenser dump valves. The steam dump mode selector switch was transferred to the steam pressure mode of control which functioned properly to bring Tavg to the hot standby no load value of 547°F. The control room operator followed emergency procedures E-5 (Reactor Trip) and E-6 (Turbine and Generator Trip) and stabilized the plant in operating mode 3 (hot standby).

The initiating cause of the event was due to the random end of life failure of a transistor in the exciter voltage regulator. This transistor has since been replaced. Troubleshooting of the steam dump control circuitry has revealed that the mode selector switch contacts were not "made" in the Tavg position due to dirt accumulation. These contacts have been cleaned and the system restored to normal operation. The autostart of the #1 diesel generator, and the tripping of the 1A and 1C cooling tower pumps has been postulated to be conservative relay settings. The relay department, through the electrical maintenance group, is investigating these relay actuations and corrective actions will be taken as necessary.

There were no safety implications as a result of this event since all designed protective features actuated in a conservative manner. Failure of the steam dumps to operate in the Tavg mode is not considered significant since accident analysis as described in the UFSAR under Section 14.1.7.2 does not consider their operation.





Nuclear Division P.O. Box 4 Shippingport, PA 15077-0004

> June 22, 1984 ND1SS1:2103

Beaver Valley Power Station, Unit No. 1 Docket No. 50-334, License No. DPR-66 LER 84-004

Dr. Thomas E. Murley Regional Administrator United States Nuclear Regulatory Commission Region 1 Park Avenue King of Prussia, PA 19406

Gentlemen:

In accordance with Appendix A, Beaver Valley Technical Specification, the following Licensee Event Report is submitted:

LER 84-004, 10 CFR 50.73 (a)(2)(IV), "Automatic Actuation of Reactor Protection System (RPS)".

Very truly yours,

Wm. S. Lacey

Station Superintendent

Attachment

T. E. Murley June 22, 1984 ND1SS1:2103 Page two

cc: Director of Management & Program Analysis
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Washington, D.C. 20555

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