

L I C E N S E E E V E N T R E P O R T (L E R)

FACILITY NAME (1) Arkansas Nuclear One, Unit Two DOCKET NUMBER (2) PAGE (3)
01510101 31 61 8111011
TITLE (4) Reactor Trip Due to Component Failure In Control Element Assembly Calculators

EVENT DATE (5)			LER NUMBER (6)		REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
Month	Day	Year	Sequential Number	Revision Number	Month	Day	Year	Facility Names	Docket Number(s)
01	08	1985	01	01	01	09	11		01510101
OPERATING MODE (9) 1 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)									
POWER LEVEL (10) 11010			20.402(b)		20.405(c)		X 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
			20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		Abstract below and
			20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		in Text, NRC Form
			20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		366A)

L I C E N S E E C O N T A C T F O R T H I S L E R (1 2)
Name Patrick C. Rogers, Plant Licensing Engineer Telephone Number
Area
Code
510119641-1311010

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	J	C	M	P	X				
			S	5	2				Y
X	S	B	P	C	O				
			C	6	3				Y

S U P P L E M E N T R E P O R T E X P E C T E D (1 4)
EXPECTED SUBMISSION DATE (15)
Month Day Year
1 Yes (If yes, complete Expected Submission Date) X No
A B S T R A C T (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On 8/16/85, at 0929 hours a reactor trip occurred while operating in Mode 1 at 100% full power (FP). Emergency feedwater (EFW) was actuated on low steam generator (SG) level. Manual control of EFW was taken to maintain desired SG levels. Steam dump valve 2CV-0306 was opened as designed on the reactor trip but did not close when steam pressure was reduced. However, the open valve did not have a significant effect on post trip parameters. Valve 2CV-0306 was isolated promptly. The feedback arm on the valve positioner was found to be broken. The feedback arm was replaced. Valve 2CV-0306 was verified operable and returned to service. Investigation into the cause of the reactor trip revealed that field effect transistors (FET) had failed in the high level multiplexer cards for the Control Element Assembly Calculator (CEAC) Number 2 analog input. This resulted in erroneous Control Element Assembly (CEA) position signals to CEAC 2 and Core Protection Calculator (CPC) Channel C. These erroneous signals resulted in large penalty factors being generated in CEAC 2 which were input to the CPC's. As a result the CPC's generated low DNBR reactor trip signals. Amplifier and high level multiplexer cards were replaced as necessary in the CPC/CEAC analog input chassis. Since it is believed that failure of more than one FET would be required to produce the erroneous signals, development of tests to identify single failures in these cards is being investigated.

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ARKANSAS POWER & LIGHT COMPANY

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September 16, 1985

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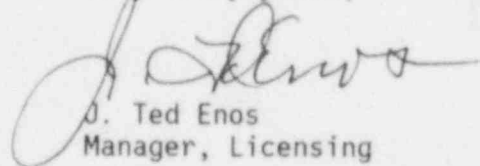
U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Subject: Arkansas Nuclear One - Unit 2
Docket No. 50-368
License No. NPF-6
Licensee Event Report
No. 85-018-00

Gentlemen:

In accordance with 10CFR50.73(a)(2)(iv), attached is the subject report concerning a reactor trip due to component failure in control element assembly calculators.

Very truly yours,



J. Ted Enos
Manager, Licensing

JTE:RJS:sc

Attachment

cc: Mr. James M. Taylor
Office of Inspection and Enforcement
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Mr. Norman M. Haller, Director
Office of Management & Program Analysis
U. S. Nuclear Regulatory Commission
Washington, DC 20555

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