

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)
10151010101 31 61 81101011
TITLE (4) Error in COLSS Calculated DNBR Power Operating Limit

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	06	1985	01	01	01	06	1985		0151010101	

OPERATING MODE (9) THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5:
(Check one or more of the following) (11)

POWER LEVEL (10)	20.402(b)	20.405(a)(1)(i)	20.405(a)(1)(ii)	20.405(a)(1)(iii)	20.405(a)(1)(iv)	20.405(a)(1)(v)	50.73(a)(2)(iv)	50.73(a)(2)(v)	50.73(a)(2)(vii)	50.73(a)(2)(viii)(A)	50.73(a)(2)(viii)(B)	50.73(a)(2)(x)	73.71(b)	73.71(c)	Other (Specify in Abstract below and in Text, NRC Form 366A)
				X											

LICENSEE CONTACT FOR THIS LER (12)

Name	Patrick C. Rogers, Plant Licensing Engineer	Telephone Number	
		Area	
		Code	
			51011916141-1311010

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

SUPPLEMENT REPORT EXPECTED (14)

Yes (If yes, complete Expected Submission Date)	No	EXPECTED SUBMISSION DATE (15)	Month	Day	Year

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

On 6/17/85 at 2215 hours, the Core Operating Limits Supervisory System (COLSS) was declared inoperable due to discovery of an error in the calculation of the DNBR Power Operating Limit (POL). An unusually high DNBR POL was observed, and the ensuing investigation revealed an input error had been made during implementation of the Cycle 5 COLSS update. COLSS calculates POL's based on DNBR, linear heat rate and licensed power level. The most conservative POL is displayed, and an alarm received if actual power exceeds this limit. Technical Specification 3.2.4 requires DNBR margin be maintained within the region of acceptable operation by using either COLSS or the Core Protection Calculators (CPCs). This error caused the COLSS calculation to be non-conservative, therefore making the POL alarm inoperable. However, review of operating logs indicate that the plant was operated within the required DNBR power operating limits during the period that the alarm was inoperable. Upon declaring COLSS inoperable, power was reduced to establish DNBR margin per the CPC calculations as required by T.S. 3.2.4. The COLSS coding error was corrected and COLSS was verified operable by independent calculations before being returned to service at 1740 hours on 6/19/85. An integrated software test will be developed to provide independent verification of calculations following COLSS software revisions.



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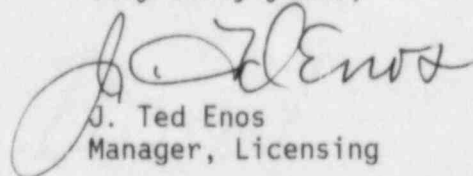
U. S. Nuclear Regulatory Commission
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Subject: Arkansas Nuclear One - Unit 2
Docket No. 50-368
License No. NPF-6
Licensee Event Report
No. 85-012-00

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i), attached is the subject report concerning inoperability of the Core Operating Limits Supervisory System. This was caused by an input error during the Cycle 5 update and a resulting error in the calculation of DNBR Power Operating Limit.

Very truly yours,


J. Ted Enos
Manager, Licensing

JTE:RJS:ds

Attachment

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

Mr. Richard C. DeYoung
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