

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 2 DOCKET NUMBER (2) | PAGE (3)
| 01510101 | 31 61 81 | 0101012

TITLE (4)
Reactor Trip During Low Power Physics Testing

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	21	84	01	01	01	21	84		01510101

OPERATING MODE (9) | 2 | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

POWER LEVEL (10)	20.402(b)	20.405(c)	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)

LICENSEE CONTACT FOR THIS LER (12)
Name | Patrick Rogers, Special Projects Coordinator | Telephone Number |
| | Area |
| | Code |
| 51011-19641-1311010

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 (I, yes, complete Expected Submission Date) | | No |
| | SUBMISSION | | DATE (15) | | Month | | Day | | Year |

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

On 1/28/84 at 0831 Unit 2 tripped from $\sim 3 \times 10^{-3}\%$ FP during low power physics testing. The Core Protection Calculators (CPCs) generated an auxiliary trip when the integrated one pin peaking factor limit as calculated by the CPCs was exceeded due to CEA position during testing without the CPCs in bypass. Initial criticality after refueling was achieved using a physics testing procedure which required bypassing the CPC trips to allow certain physics test to be performed. The reactor was manually tripped as part of a physics test procedure. When the reactor was returned to criticality, the normal operations procedure was used. This procedure did not contain the provisions for special test exceptions (CPC bypasses) required for physics testing. Low power physics testing continued without the CPCs bypassed. During the measurement of CEA group worth, group 4 rods were being inserted with all remaining rods out. At this time the calculated integrated one pin peaking factor limit was exceeded causing an auxiliary trip to be generated by the CPCs. This is an expected condition during low power physics testing and special test exceptions allow trip bypassing. Due to procedural deficiencies, the CPCs had not been bypassed. A temporary procedure change was made to delete the step which removes the CPCs from bypass. No anomalies were noted following the trip.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		<table border="1"> <tr> <td>Sequential</td> <td>Revision</td> </tr> <tr> <td>Year</td> <td>Number</td> </tr> </table>	Sequential	Revision	Year	Number	
Sequential	Revision						
Year	Number						
Arkansas Nuclear One - Unit 2	10510101316181	814--0011--010	012101012				

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

On 1/28/84 at 0831 Unit 2 tripped from $\sim 3 \times 10^{-3}\%$ FP during low power physics testing. The CPCs generated an auxiliary trip when the integrated one pin peaking factor limit as calculated by the CPCs was exceeded due to CEA position during testing without the CPCs in bypass.

Operations had achieved criticality via the "Initial Criticality Following Refueling" procedure. This procedure requires bypassing the CPCs. Physics testing was proceeding under the procedure entitled "Sequence for Low Power Physics Testing Following Refueling." Prior to executing the "Determination of Regulating CEA Group Worth" procedure, the reactor was manually tripped as required by surveillance requirements of the Technical Specification special test exceptions. This requirement provided assurance that rod insertion will occur during a trip for conditions of reduced shutdown margin.

The reactor trip was returned to critical using the normal operating procedure for "Approach to Criticality". This procedure requires the CPC bypasses be removed prior to exceeding $10^{-4}\%$ FP. Low power physics testing continued without the CPCs bypassed. During measurement of CEA group worths, group 4 rods were being inserted with all remaining rods out. This evolution caused the integrated one pin peaking factor calculated by the CPCs to exceed its setpoint. This is an expected condition during low power physics testing and special test exceptions are provided which allow the trip function to be blocked.

Because of the use of the normal operating procedure for return to criticality the CPCs were not bypassed prior to proceeding with physics testing. A temporary change was made to the "Approach to Criticality" procedure to delete the step which removes the CPCs from bypass. The reactor was returned to critical and physics testing resumed. No anomalies were noted following the trip.



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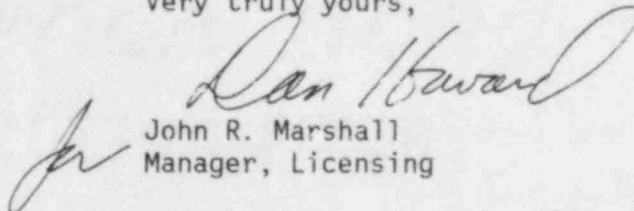
U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Subject: Arkansas Nuclear One - Unit 2
Docket No. 50-368
License No. NPF-6
Licensee Event Report
No. 84-001-00

Gentlemen:

In accordance with Arkansas Nuclear One - Unit 2 Technical Specification 10CFR50.73(a)(2)(iv), attached is the subject report concerning a reactor trip during low power physics testing..

Very truly yours,


John R. Marshall
Manager, Licensing

JRM:DRh:si

Attachment

cc: Mr. John F. Streeter, Chief
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