

LICENSEE EVENT REPORT (LER)

On 6/17/84, at 1249 hours the reactor tripped from 100% full power (FP) on low departure from nucleate boiling ratio (DNBR) due to penalty factors generated by the Core Protection Calculators (CPC) as a result of a dropped control element assembly (CEA). Moderator temperature coefficient (MTC) testing had been completed and power had been returned to 100% FP at 1243. CEA's were being used to stabilize reactor power when CEA #1 dropped. During the automatic transfer of auxiliary power from the unit auxiliary transformer to startup transformer #3 initiated by the trip, fast transfer to 6900 volt bus 2H2 was unsuccessful leaving the bus de-energized. This resulted in a loss of 2 reactor coolant pumps. The other 2 pumps maintained forced circulation while the tripped pumps were returned to service. Post-trip parameters were acceptable and posed no operational problems. Troubleshooting did not reveal the causes of the equipment malfunctions. Subsequent testing/operation of the equipment was satisfactory.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		Sequential	Revision		
		Year	Number	Number	
Arkansas Nuclear One, Unit 2	10510101 31 61 81	81 41 --	0 1 3 1 --	0 1 0	101210F1012

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

On 6/17/84, at 1220 hours moderator temperature coefficient (MTC) testing which is conducted at approximately 95% FP, was completed and a power increase to 100% FP was commenced. 100% FP was attained at 1243 hours. Control element assembly (CEA) bank 6 was being used to stabilize reactor power when CEA #1 (EIIIS Identifier = 02AA-Rod-001) dropped into the core. As a result, penalty factors used in the Core Protection Calculators (CPC) calculations generated a low DNBR value and a reactor trip occurred at 1249 hours. CEA #1 is located in the center location of the core, therefore, no tilt problems occurred with insertion of this CEA. During the automatic transfer of auxiliary power from the unit auxiliary transformer to startup transformer #3, 6900 volt bus 2H2 lockout relay tripped, preventing startup transformer (SU) #3 feeder breaker to 2H2 bus from closing and resulting in the bus being de-energized. As a result Reactor Coolant Pumps (RCP) 2P-32B and 2P-32C tripped as well as circulating water pump 2P-3B. 2P-32B and 2P-32C were restarted at 1456 hours and 1535 hours respectively. No post-trip difficulties were noted as a result of the loss of the 2H2 bus. Forced circulation was maintained with one pump per loop as bus 2H1 remained energized and provided power for RCP's 2P-32A and 2P-32D. The emergency feedwater system actuated as required. Manual control was taken of the emergency feedwater system to maintain the desired steam generator levels. Post-trip parameters were acceptable and posed no operational problems. Troubleshooting revealed no definitive cause for the dropped CEA. Visicorder traces of CEA #1 were normal. Withdrawal and insertion of CEA #1 during troubleshooting yielded no malfunctions. The cause may have been due to a sluggish upper gripper coil, but this could not be confirmed. Additionally, a CEA exercise was performed on 6/8/84, with satisfactory results.



ARKANSAS POWER & LIGHT COMPANY

POST OFFICE BOX 551 LITTLE ROCK, ARKANSAS 72203 (501) 371-4000

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Subject: Arkansas Nuclear One - Unit 2
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Licensee Event Report
No. 84-013-00

Gentlemen:

In accordance with 10CFR50.73(a)(2)(iv), attached is the subject report concerning a reactor trip generated by the Core Protection Calculators.

Very truly yours,

John R. Marshall
Manager, Licensing

JRM:RJS:ac

Attachment

cc: Mr. Richard C. DeYoung
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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