



February 19, 1991

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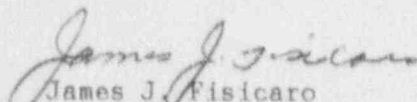
U. S. Nuclear Regulatory Commission
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SUBJECT: Arkansas Nuclear One - Unit 2
Docket No. 50-368
License No. NPF-6
Licensee Event Report 50-368/91-003-00

Gentlemen:

In accordance with 10CFR50.73(a)(2)(i)(B), attached is the subject report concerning a procedural inadequacy which resulted in a failure to adhere to the reduced power requirements of Technical Specifications during recovery from a dropped control element assembly.

Very truly yours,


James J. Fisicaro
Manager, Licensing

JJF/RHS/mmg
Attachment

cc: Regional Administrator
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Arkansas Nuclear One, Unit Two

DOCKET NUMBER (2)	PAGE (3)
05000368	1 OF 04

TITLE (4) Procedural Inadequacy Results In A Failure To Adhere To The Reduced Power Requirements Of Technical Specifications During Recovery From A Dropped Control Element Assembly

EVENT DATE (5)			LER NUMBER (6)		REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)																	
Month	Day	Year	Year	Sequential Number	Revision Number	Month	Day	Year	Facility Names	Docket Number(s)															
0	1	1	8	9	1	9	1	--	0	0	3	--	0	0	0	2	1	9	9	1	0	5	0	0	0
										0	5	0	0	0											

OPERATING MODE (9) 1 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

POWER LEVEL (10)	Year	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)	20.405(c)	50.36(c)(1)	50.36(c)(2)	50.73(a)(2)(i)	50.73(a)(2)(ii)	50.73(a)(2)(iii)	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)	
	9	7																					
											X												

LICENSEE CONTACT FOR THIS LER (12)

Name	Telephone Number
Richard H. Scheide, Nuclear Safety and Licensing Specialist	Area Code: 501-964-5000

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

Cause	System	Component	Manufacturer	Reportable to NERDS	Cause	System	Component	Manufacturer	Reportable to NERDS

SUPPLEMENT REPORT EXPECTED (14)

<input type="checkbox"/> Yes (If yes, complete Expected Submission Date)	<input checked="" type="checkbox"/> No	EXPECTED SUBMISSION DATE (15)	Month	Day	Year

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

On January 18, 1991 at 1415, while performing Control Element Assembly (CEA) current traces, Group 6 CEA 46 dropped to its fully inserted position. Operations personnel reduced power to 97.5 percent in accordance with the "CEA Misalignment" procedure (AOP 2203.03). At 1429, after determining that the cause of the dropped rod had been the inadvertent opening of its circuit breaker, the operators commenced withdrawing CEA 46 to realign it with the rest of the Group 6 CEAs. Reactor power was held constant (97.5 percent) during the recovery effort, as directed by AOP 2203.03. At 1443, CEA 46 reached realignment with Group 6. A subsequent evaluation determined that the time dependent reduced power requirements of Technical Specifications (TS) regarding dropped CEAs was not adhered to during the recovery. TS required that during the period of recovery, power should have been reduced by 5.8 percent. The root cause of this event was determined to be inadequate procedural guidance. AOP 2203.03 was ambiguous with respect to reduced power requirements. This event was discussed with the operations crews. A procedure change was implemented to remove the ambiguities regarding reduced power requirements.

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

A. Plant Status

At the time of this event, Arkansas Nuclear One, Unit 2 (ANO-2) was operating at approximately 97.5 percent of rated power. Reactor Coolant System (RCS) [AB] temperature was approximately 579 degrees and RCS pressure was 2250 psia.

B. Event Description

On January 18, 1991, a violation of the ANO-2 Technical Specifications (TS) occurred regarding reduced power requirements of TS Table 3.1-1A. The TS were not adhered to during recovery from a dropped Control Element Assembly (CEA) condition.

ANO-2 TS specify that with one full length or part length CEA misaligned from any other CEA in its group by more than 19 inches, operation in Modes 1 and 2 may continue provided that reactor power is reduced in accordance with Figure 3.1-1A and within one hour the misaligned CEA is either restored to operable status within its alignment requirements or declared inoperable and specified compensatory conditions are established. Figure 3.1-1A requires that a reactor power reduction be initiated within fifteen minutes after a CEA is misaligned and that core power must be reduced at a rate in accordance with the figure up to a total reduction of at least 20 percent of rated power within one hour.

On January 18, 1991 at approximately 1415, while performing CEA current traces, Group 6 CEA 46 dropped to its fully inserted position. Operations personnel took action to reduce turbine load in accordance with Abnormal Operating Procedure (AOP) 2203.03 (CEA Malfunctions). Using the procedural guidance, the operators then determined the maximum permissible reactor power to be 98 percent and reduced power to 97.5 percent. At 1428, after determining that the cause of the dropped CEA had been the inadvertent opening of its circuit breaker, the breaker was reclosed and the CEA was withdrawn approximately 3 inches to prove its operability. At 1429, the operators commenced withdrawing CEA 46 to realign it with the rest of the Group 6 CEAs. While withdrawing CEA 46, reactor power was held constant (97.5 percent), as directed by the AOP. At 1443, CEA 46 reached realignment with the other Group 6 CEAs.

On January 29, 1991 during an evaluation of the CEA recovery evolution, Reactor Engineering personnel determined that, although core power was within the limits established by Figure 3.1-1A when CEA withdrawal commenced, core power was not reduced at a rate required by the curve at the time the recovery was completed. Reactor power was reduced by 2.5 percent for the entire CEA recovery evolution, which lasted approximately 28 minutes. TS Figure 3.1-1A requires that, 28 minutes after the CEA is mispositioned, core power must be reduced by 5.8 percent.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

C. Root Cause

The root cause of this event was determined to be procedural inadequacy. The guidance contained in AOP 2203.03 (CEA Malfunctions) was both inadequate and conflicted with Technical Specifications requirements. The procedure stated that, "Within one hour, reduce plant power to comply with TS Figure 3.1-1A". It did not convey the need to continuously reduce power throughout the hour in order to comply with Technical Specifications. The procedure also stated that, "During withdrawal, maintain reactor power constant, preferably by boration". It was, however, during CEA withdrawal that the need to further reduce power occurred.

D. Corrective Actions

An Operations Night Order was issued discussing this event. Each Shift Supervisor was directed to discuss the event with his operating crew.

A procedure change to AOP 2203.03 was implemented to remove the ambiguities with respect to compliance with TS Figure 3.1-1A.

Additionally, this event will be discussed with Operations personnel during the next requalification training cycle.

E. Safety Significance

An evaluation of this event was performed by Combustion Engineering, as requested by ANO. This evaluation determined that, although the power reduction requirements of TS Figure 3.1-1A were not met, the minimum initial power margin in the Core Operating Limit Supervisory System, combined with the power reduction of 2.5 percent, was sufficient to preclude violation of any applicable Specified Acceptable Fuel Design Limits. Therefore, there was no safety significance associated with this event.

F. Basis For Reportability

Not complying with the power reduction requirements of TS Figure 3.1-1A during recovery from a dropped CEA constitutes a violation of the ANO-2 Technical Specifications and is reportable pursuant to 10CFR50.73(a)(2)(i)(B).

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

G. Additional Information

There have been no previous similar events reported by ANO.

Energy Industry Information System (EIIS) codes are identified in the text as [XX].