



May 25, 1995

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

ULNRC-03218

Gentlemen:

**DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30
LICENSEE EVENT REPORT 95-001-00
MANUAL REACTOR TRIP AS A RESULT OF SHUTDOWN BANK A,
GROUP ONE DROPPING INTO THE CORE DURING REPLACEMENT OF
ROD CONTROL SYSTEM FIRING CARD**

The enclosed Licensee Event Report is submitted pursuant to 10CFR50.73(a)(2)(iv) for an event or condition that resulted in manual actuation of a reactor trip.

A handwritten signature in cursive script, appearing to read "R. D. Affolter".

R. D. Affolter
Manager, Callaway Plant

Handwritten initials "RDA" and "HDB" above the typed text.
RDA/HDB/JDN/lrj

Enclosure

cc: Distribution attached

310005

IF22
11

cc distribution for ULNRC-03218

Mr. J. B. Martin
Regional Administrator
U. S. Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Mr. L. Raynard Wharton (2 copies)
Licensing Project Manager
U. S. Nuclear Regulatory Commission
OWFN - Mail Stop 13E21
Washington, D. C. 20555

Manager, Electric Department
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102

Records Center
Institute of Nuclear Power Operations
700 Galleria Parkway
Atlanta, GA 30339

Mr. Steve Wideman
Supervisor, Licensing
Wolf Creek Nuclear Operating Corporation
P. O. Box 411
Burlington, KS 66839

Mr. M. J. Farber
Chief, Reactor Projects Section III A
U. S. Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Mr. Thomas A. Baxter
Shaw, Pittman, Potts & Trowbridge
2300 N. Street N.W.
Washington, D.C. 20037

NRC Senior Resident Inspector

LICENSEE EVENT REPORT (LER)																					
FACILITY NAME (1) Callaway Plant Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 4 8 3						PAGE (3) 1 OF 0 3					
TITLE (4) Manual Reactor Trip As a Result of Shutdown Bank A, Group One Dropping Into the Core During Replacement of Rod Control System Firing Cord																					
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)											
MONTH	DAY	YEAR	YEAR		SEQUENTIAL NUMBER	REV. NO.	MONTH	DAY	YEAR	FACILITY NAMES					DOCKET NUMBER(S)						
0 5	0 1	9 5	9 5	-	0 0 1	- 0 0	0 5	2 5	9 5						0 5 0 0 0						
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR : (Check one or more of the following) (11)																			
2		20.402(b)				20.405(c)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)				73.71(b)							
POWER LEVEL (10)		0 0 0				20.405(a)(1)(i)				50.38(c)(1)				50.73(a)(2)(v)				73.71(c)			
		20.405(a)(1)(ii)				50.38(c)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)							
		20.405(a)(1)(iii)				50.73(a)(2)(j)				50.73(a)(2)(viii)(A)											
		20.405(a)(1)(iv)				50.73(a)(2)(h)				50.73(a)(2)(viii)(B)											
		20.405(a)(1)(v)				50.73(a)(2)(ii)				50.73(a)(2)(x)											
LICENSEE CONTACT FOR THIS LER (12)																					
NAME H. D. Bono, Supervising Engineer, Site Licensing										TELEPHONE NUMBER AREA CODE 3 1 4 6 7 6 - 4 4 2 8											
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	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		
X	A A	E C B D	W 1 2 0	N																	
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (15)					MONTH DAY YEAR						
YES (if yes, complete EXPECTED SUBMISSION DATE)										<input checked="" type="checkbox"/> NO											
ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines)(16)																					
On 5/1/95 at 1617 hours CDT, startup physics testing was in progress while the plant was in Mode 2 with reactor power at 1.0 E-7 amps. At this time, a Rod Control Urgent Failure (RCUF) annunciator alarmed. Utility Instrumentation and Control (I&C) personnel investigated the condition in accordance with procedure ITM-ZZ-00015, Rod Control Troubleshooting Guidelines, and determined the cause to be a failed stationary firing card for Control Bank C, Group One. In addition, the stationary firing card for Shutdown Bank A, Group One, was determined to have a degraded voltage. The failed card was replaced and additional readings taken. It was then decided to replace the degraded card as a precautionary measure. When this card was removed, current to the associated stationary grippers was interrupted and the control rods dropped. The condition was immediately noted by the utility licensed reactor operator in the Control Room and the reactor was manually tripped at 2031 hours CDT. The root cause of the dropped rods was a failure to properly restore from the RCUF on Control Bank C prior to removing the card for Shutdown Bank A. Procedure ITM-ZZ-00015 was revised to provide additional guidance, and appropriate personnel will be trained to prevent recurrence of this event.																					

On 5/1/95 at 1617 hours CDT, startup physics testing was in progress while the plant was in Mode 2 with reactor power at 1.0 E-7 amps. At this time, a Rod Control Urgent Failure (RCUF) annunciator alarmed. Utility Instrumentation and Control (I&C) personnel investigated the condition in accordance with procedure ITM-ZZ-00015, Rod Control Troubleshooting Guidelines, and determined the cause to be a failed stationary firing card for Control Bank C, Group One. In addition, the stationary firing card for Shutdown Bank A, Group One, was determined to have a degraded voltage. The failed card was replaced and additional readings taken. It was then decided to replace the degraded card as a precautionary measure. When this card was removed, current to the associated stationary grippers was interrupted and the control rods dropped. The condition was immediately noted by the utility licensed reactor operator in the Control Room and the reactor was manually tripped at 2031 hours CDT. The root cause of the dropped rods was a failure to properly restore from the RCUF on Control Bank C prior to removing the card for Shutdown Bank A. Procedure ITM-ZZ-00015 was revised to provide additional guidance, and appropriate personnel will be trained to prevent recurrence of this event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
Callaway Plant Unit 1	0 5 0 0 0 4 8 3	YEAR	SEQUENTIAL NUMBER	REV NO.			
		9 5 -	0 0 1 -	0 0			
					0 2	OF	0 3

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

BASIS FOR REPORTABILITY:

This event is reportable per the requirements of 10CFR50.73(a)(2)(iv) as an event or condition that resulted in manual actuation of the Reactor Protection System.

CONDITION AT TIME OF EVENT:

Mode 2 - Plant startup

Reactor Power - 1.0 E-7 amps

DESCRIPTION OF EVENT:

On 5/1/95 at 1617 hours CDT, startup physics testing was in progress. The plant was in Mode 2 with reactor power at 1.0 E-7 amps. At this time, a Rod Control Urgent Failure (RCUF) annunciator alarmed. Utility Instrumentation and Control (I&C) personnel investigated the condition in accordance with procedure ITM-ZZ-00015, Rod Control Troubleshooting Guidelines. The cause of the RCUF was determined to be a failed stationary firing card for Control Bank C control rods. In addition, the stationary firing card for Shutdown Bank A, Group One, was determined to have a slightly degraded voltage. The failed firing card was replaced. It was decided to replace the second card as a precautionary measure. When the Shutdown Bank A firing card was removed, electrical current to the stationary grippers was interrupted, thus allowing the release of the four affected control rods. The RCUF alarm, in conjunction with the rod control cabinet Bank selector switch, energizes the Bank stationary and movable grippers to hold the control rods in place. The Shutdown Bank A control rods dropped because the RCUF was not restored from Control Bank C prior to removing the card for Shutdown Bank A. In this event, the Bank selector switch was still selected to Control Bank C when the firing card for Shutdown Bank A was pulled from the cabinet.

This situation was immediately noted by the utility licensed reactor operator and a manual reactor trip was initiated in accordance with Off-Normal Operating procedure OTO-SF-00003, Dropped Control Rod.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REV NO.			
Callaway Plant Unit 1	0 5 0 0 0 4 8 3 9 5	-	0 0 1	-	0 0	0 3	OF 0 3

TEXT (If more space is required, use additional NRC Form 386A's)(17)

ROOT CAUSE:

The root cause of the event was cognitive personnel error. Personnel failed to recognize that with the RCUF alarm in and Control Bank C still selected, pulling the firing card for Shutdown Bank A would remove current to the stationary gripper coils and cause control rods to drop into the core.

CORRECTIVE ACTIONS:

1. Appropriate personnel will be trained to prevent recurrence of this event.
2. ITM-ZZ-00015 has been revised to provide additional guidance.

SAFETY SIGNIFICANCE:

The ESF systems involved performed as required. At the time of the event, the reactor was critical in Mode 2 at a power level of 1.0 E-7 amps. There was no detrimental effect on plant equipment as a result of this event. All equipment functioned as required by plant design. This event did not pose a threat to the health and safety of the public.

PREVIOUS OCCURRENCES:

LER 90-007-00 transmitted on 7/10/90 details a manual reactor trip after four Bank B control rods dropped. Troubleshooting identified a faulty slave cyclor counter card for the control rod power cabinet. Although the 7/10/90 manual reactor trip was similar to the 5/1/95 reactor trip, the root cause for LER 90-007-00 was a faulty card. The corrective action taken for LER 90-007-00 was not applicable to this event.

FOOTNOTES:

1. System AA, Component-ROD
2. System JC
3. System JE