NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Callaway Plant Unit 1	0 5 0 0 0 4 8 3	1 OF 0 3

TITLE (4)

Inadvertent Engineered Safety Features Actuations

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 5 0 0 0
1 0	0 5	8 4	8 4	— 0 4 6	— 0 0	1 1	0 5	8 4		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)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 0 1 0	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 Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
	20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
	20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Charles D. Naslund - Superintendent, I&C	AREA CODE 3 1 1 4 — 6 7 6 - 1 8 5 0 0

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	
X	J B	L T	W 1 2 0	N							
X	S J	I S V	A 3 9 1	N							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On 10/5/84 a Reactor Trip occurred as a result of low level signals received from steam generator (S/G) "B" level transmitters. Also initiated were a Feedwater Isolation Signal, Auxiliary Feedwater Actuation Signal, and S/G Blowdown Isolation Signal. These Engineered Safety Features performed properly with the exception of a Main Feedwater Isolation Valve which failed to close.

The bistables of one S/G level transmitter were in the tripped position due to maintenance in progress at the time. A second level transmitter spiked low and thus satisfied the 2 of 4 Reactor Trip logic. The cause of the low spike is unknown.

The Reactor Operators recovered from the Reactor Trip via plant procedures and then began an investigation into the cause of the trip. There was no damage to plant equipment or release of radioactivity as a result of this incident. At no time was the public health or safety threatened.

IE22

NRC Form 366
(9-83)

1/1

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Callaway Plant Unit 1	0 5 0 0 0 4 8 3	8 4	— 0 4 6	— 0 0	0 2 OF 0 3

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

At 1720 CDT on 10/5/84, a Reactor Trip occurred as a result of low level signals received from steam generator (S/G) "B" level transmitters. Also initiated were a Feedwater Isolation Signal (FWIS), Auxiliary Feedwater Actuation Signal (AFAS), and S/G Blowdown Isolation Signal (SGBDIS). These Engineered Safety Features (ESF) performed properly with the exception of a Main Feedwater Isolation Valve (MFIV) which failed to close. The plant was in Mode 2 at a Reactor Power level of 10E-8 amps at the time of the trip. The average Reactor Coolant System (RCS) temperature was 557°F and the RCS pressure was 2235 psig.

S/G "B" level transmitter AE-LT-0529 was taken out-of-service at 0835 on 10/5/84 due to maintenance on its root valve, AE-V-0142. As required by Technical Specifications, the bistables of AE-LT-0529 were placed in the tripped position when the channel was taken out-of-service.

At 1720 on 10/5/84, S/G "B" level transmitter AE-LT-0552 spiked low and thus satisfied the 2-of-4 Reactor Trip logic. Also initiated by the S/G low level signal was an AFAS and a SGBDIS. A FWIS occurred as a result of the Reactor Trip coupled with a RCS average temperature below 564°F. These ESF actuations performed properly except for the failure of Main Feedwater Isolation Valve AE-FV-0041 to close.

Emergency operating procedures E-0, Reactor Trip or Safety Injection, and ES-0.1, Reactor Trip Recovery, were performed immediately following the Reactor Trip. After stabilizing the plant, an investigation was begun to determine the cause of the trip.

A thorough review of the plant conditions and activities at the time did not reveal the cause of the spike on level channel AE-LT-0552. After all reasonable efforts to determine the cause of the spike failed, the channel was restored to service. A test recorder which was connected to the level channel for approximately 48 hours after the incident did not identify any electronic spiking problems. The level transmitter, AE-LT-0552 (Model No. 764), was supplied by the Westinghouse Electric Corporation. To reduce the possibility of similar occurrences, the time during which a manual channel trip is inserted is to be kept to a minimum during future maintenance.

A loss of hydraulic fluid was found to be the cause of the failure of Main Feedwater Isolation Valve AE-FV-0041. Hydraulic fluid leakage resulted when a hydraulic needle valve in the actuator experienced an O-ring failure. In an effort to maintain pressure, hydraulic fluid was automatically pumped into the system which subsequently leaked through the faulty O-ring.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Callaway Plant Unit 1	0 5 0 0 0 4 8 3	8 4	— 0 4 6	— 0 0	0 3 OF 0 3

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

The O-ring was replaced with the assistance of a manufacturer representative (Anchor/Darling Valve Company) and the MFIV (Model No. S.O. E-6181) was returned to service on 10/8/84. Significant O-ring failures associated with the MFIVs have not been experienced, therefore no further corrective action is deemed necessary.

A MFIV failure is an analyzed condition and redundant protection is provided by the closing of the Main Feedwater Control Valve and the Main Feedwater Bypass Control Valve upon a FWIS. Therefore, this event did not present a significant safety concern.

There was no damage to plant equipment or release of radioactivity as a result of this incident. At no time did this event pose a threat to the public health or safety.

Previous occurrences: none

Note: LERs 84-035-00 and 84-040-00 submitted on 10/6/84 and 10/15/84 describe similar ESF actuations which occurred as a result of S/G "B" level transmitters. The causal factors identifed in these incidents were deficient valving sequences and inadequate knowledge of common tap instrumentation interactions. These causes could not be identified as the reason for the spurious signal from AE-LT-0552 on 10/5/84. Therefore, these incidents are not considered related.

UNION ELECTRIC COMPANY
CALLAWAY PLANT

MAILING ADDRESS:
P. O. BOX 620
FULTON, MO. 65251

November 5, 1984

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

ULNRC-964

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30
LICENSEE EVENT REPORT 84-046-00
INADVERTENT ENGINEERED SAFETY FEATURES ACTUATIONS

Gentlemen:

The enclosed Licensee Event Report is submitted pursuant to 10 CFR 50.73(a)(2)(iv) concerning inadvertent Engineered Safety Features actuations.

Steven E. Miltenberger

S. E. Miltenberger
Manager, Callaway Plant

CDN/WRR/JWK/drs
Enclosure

cc: Distribution attached

IE22
1/1

cc distribution for ULNRC-964

Mr. James G. Keppler
Regional Administrator
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

American Nuclear Insurers
c/o Dottie Sherman, Library
The Exchange Suite 245
270 Farmington Aveune
Farmington, CT 06032

Records Center
Institute of Nuclear Power Operations
Suite 1500
1100 Circle 75 Parkway
Atlanta, GA 30339

NRC Resident Inspector
Missouri Public Service Commission
D. F. Schnell
J. F. McLaughlin
J. E. Davis (Z40LER)
D. W. Capone/R. P. Wendling
F. D. Field
R. L. Powers
A. C. Passwater/D. E. Shafer/D. J. Walker
G. A. Hughes
W. R. Robinson (QA Record)
C. D. Naslund
J. M. Price
R. A. McAleenan
L. K. Robertson (470)(NSRB)
Merlin Williams, Wolf Creek
SEM Chrono
3456-0021.6
3456-0260
Z40ULNRC
G56.37
N. Date