

LICENSEE EVENT REPORT (LER)

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

TITLE (4) Spurious Control Room Ventilation Isolation Signals

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	5	8	5	0	0	3	0	1	0	8	3	0	8	5	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)	0	4	8	20.402(b)	20.405(c)	X	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 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)(ix)				

LICENSEE CONTACT FOR THIS LER (12)

NAME Charles D. Naslund - Superintendent, I&C TELEPHONE NUMBER 311 4 617 61-18 15 1010

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

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

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

Between the dates of 1/15/85 and 1/24/85 three incidents of spurious spikes received from Control Building radiation monitor GK-RE-4 resulted in Control Room Ventilation Isolation Signals. The incidents occurred on 1/15/85 at 0450 CST, 1/20/85 at 0944, and 1/24/85 at 0228 with the plant operating in Mode 1 at 48% power, 100% power, and 89% power respectively.

The cause of these incidents and previously reported incidents, reference LERs 84-004-01, 84-025-00, 84-036-00, and 84-063-00, has been determined to be an incompatibility between the software and hardware in the RM-80 microprocessing unit for the radiation monitor.

There was no damage to plant equipment or release of radioactivity as a result of these incidents. These incidents were not the result of actual radiation levels but of spurious electronic signals, therefore the public health and safety was not endangered.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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

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

Between the dates of 1/15/85 and 1/24/85 three incidents of inadvertent Engineered Safety Feature (ESF) actuations occurred due to spurious spikes received from Control Building radiation monitor GK-RE-4. Similar incidents have been previously reported in LERs 84-004-01, 84-025-00, 84-036-00, and 84-063-00.

The first incident occurred on 1/15/85 at 0450 CST with the plant operating in Mode 1 at 48% power. A Control Room Ventilation Isolation Signal (CRVIS) was received from GK-RE-4 when a spurious spike was generated on the gaseous channel of the radiation monitor. The radiation alarm cleared within 10 seconds and by 0527 the ventilation system was returned to normal.

The second incident occurred on 1/20/85 at 0944 with the plant operating in Mode 1 at 100% power. A CRVIS was received from GK-RE-4 when another spurious spike was generated on the gaseous channel of the radiation monitor. The radiation alarm cleared within 10 seconds and by 1030 the ventilation system was returned to normal.

The third incident occurred on 1/24/85 at 0228 with the plant operating in Mode 1 at 89% power. Again a CRVIS was received from GK-RE-4 when a spurious spike was generated on the gaseous channel of the radiation monitor. The radiation alarm cleared within 11 seconds and by 0348 the ventilation system was returned to normal.

The resultant investigations into the cause for the spurious alarms, reference LER 84-004-01, have revealed that there is an incompatibility between the software and hardware in the RM-80 microprocessing unit for the radiation monitor. Through discussions with the vendor, General Atomics Technologies Inc., it was discovered that the RM-80 is presently designed to utilize "100 times overrun" software to accommodate scintillator pulse counter overflow. However, the Callaway Plant does not require the use of this type of software and therefore does not have the supporting hardware installed. General Atomics Technologies Inc. has indicated that if this software is actuated without the supporting hardware the radiation monitor would "lock up" for approximately 6 seconds at a fixed high radiation value. A review of past events has confirmed that for each of the spurious alarms received on GK-RE-4 resulting in a CRVIS the same radiation value was indicated on the alarm printout.

Before this incompatibility between the software and hardware in the RM-80 was identified, the corrective actions were to replace the CPU and/or I/O circuit boards in the RM-80. The present course of corrective action is to temporarily install the necessary hardware in the RM-80 to support the "100 times overrun" software. As a permanent solution a Callaway Modification Package is being developed which will

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replace the present "100 times overrun" software with software appropriate for use at the Callaway Plant. This is expected to be complete by 4/1/86.

There was no damage to plant equipment or release of radioactivity as a result of these incidents. These incidents were not the result of actual radiation levels but of spurious electronic signals, therefore the public health and safety was not endangered.

Previous occurrences: LERs 84-004-01, 84-025-00, 84-036-00, 84-063-00

UNION ELECTRIC COMPANY
CALLAWAY PLANT

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

August 30, 1985

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

ULNRC-1167

Gentlemen:

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30
LICENSEE EVENT REPORT 85-003-01
SPURIOUS CONTROL ROOM VENTILATION ISOLATION SIGNALS

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

for *SE Miltenberger*
S. E. Miltenberger
Manager, Callaway Plant

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CDN/WRR/RRG/drs
Enclosure

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cc distribution for ULNRC-1167

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 Avenue
Farmington, CT 06032

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

Mr. Nicholas A. Petrick
Executive Director, SNUPPS
5 Choke Cherry Road
Rockville, Maryland 20850

Mr. J. H. Smith
Bechtel Power Corporation
SNUPPS Project
15740 Shady Grove Road
Gaithersburg, Maryland 20877-1454

NRC Resident Inspector
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
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J. M. Price
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R. A. McAleenan
L. K. Robertson (470) (NSRB)
Merlin Williams, Wolf Creek
SEM Chrono
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