

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Callaway Plant Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 4 8 B	PAGE (3) 1 OF 04
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TITLE (4)
Unplanned Actuations of Engineered Safety Features

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		
08	24	84	84	036	00	09	21	84	DOCKET NUMBER(S) 0 5 0 0 0		
									DOCKET NUMBER(S) 0 5 0 0 0		

OPERATING MODE (9) 4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)									
POWER LEVEL (10) 0 0 0	20.402(b)	20.406(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)					
	20.406(a)(1)(ii)	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	73.71(c)					
	20.406(a)(1)(iii)	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)					
	20.406(a)(1)(iii)	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)						
	20.406(a)(1)(iv)	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)						
20.406(a)(1)(v)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME Charles D. Naslund - Superintendent, I&C		AREA CODE 3 1 1 4	6 7 1 6 - 1 8 5 1 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	
B	JERRE		G 0 6 3	N						

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> 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)

Between the dates of 8/24/84 and 9/14/84 seven incidents of unplanned Engineered Safety Feature (ESF) actuations occurred due to spiking problems associated with radiation monitor GK-RE-4. Six of the seven ESF actuations were initiated because of spurious spikes on GK-RE-4 and resulted in Control Room Ventilation Isolation Signals (CRVIS). The remaining unplanned ESF actuation occurred while personnel were attempting to remove a scintillator tube assembly from a monitor in the Fuel Building for installation into GK-RE-4 and resulted in a CRVIS and a Fuel Building Isolation Signal.

In addition to replacing the scintillator tube assembly for GK-RE-4, the input/output (I/O) circuit board for the microprocessing unit, RM-80, of GK-RE-4 was also replaced. No spurious alarms on GK-RE-4 have been received since 9/14/84.

All incidents occurred prior to initial criticality with the plant in Mode 4, Hot Shutdown, and Mode 3, Hot Standby, during the period.

No radiation above normal background was present and these incidents have in no way affected the health and safety of the public.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Callaway Plant Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 4 8 1 3 8 4	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (If more space is required, use additional NRC Form 368A's) (17)

Between the dates of 8/24/84 and 9/14/84 seven incidents of unplanned Engineered Safety Feature (ESF) actuations occurred due to spiking problems associated with radiation monitor GK-RE-4. Six of the seven ESF actuations were initiated because of spurious spikes on GK-RE-4 and one was caused while personnel were attempting to remove the scintillator tube assembly from the gaseous channel detector of a Fuel Building radiation monitor for installation into GK-RE-4.

All incidents occurred prior to initial criticality with the plant in Mode 4, Hot Shutdown, and Mode 3, Hot Standby, during the period.

The first incident occurred on 8/24/84 at approximately 0551 CDT with the plant in Mode 4. A high gaseous alarm was received that initiated a Control Room Ventilation Isolation Signal (CRVIS). By 1644 the CRVIS was reset per plant operating procedures. The resultant investigations of this incident had determined that the high gaseous alarm was due to a spurious spike on GK-RE-4.

On 8/25/84 at approximately 1323 and 8/26/84 at approximately 1431 with the plant in Mode 4, the second and third incidents occurred respectively. In both cases a spurious spike on GK-RE-4 initiated the CRVIS. The alarms cleared within ten seconds and the CRVIS was reset per plant operating procedures.

After the incident on 8/25/84 technicians verified that GK-RE-4 was operable in that it would perform its required function. After the third incident on 8/26/84, the cause of the spurious spikes was believed to be a faulty gaseous channel detector. A recorder was attached to the high voltage supply to the detector and to the signal output of the radiation monitor to track any current or voltage abnormalities.

On 8/27/84 at approximately 1825 while in Mode 4, the fourth CRVIS occurred because of a spurious spike on GK-RE-4. The alarm cleared within nine seconds and by 2239 the CRVIS was reset per plant operating procedures. The recorder attached to the signal output of the radiation monitor indicated that the spurious spike was being originated within the radiation monitor. It was decided to replace the scintillator tube assembly for the gaseous channel detector of GK-RE-4 with the scintillator tube assembly from a similar radiation monitor in the Fuel Building. The Fuel Building gaseous monitors are only required to be operable with irradiated fuel in the fuel storage areas or Fuel Building. New parts are on order for the Fuel Building monitor and will be installed prior to the operability requirements.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

On 8/28/84 at approximately 0040 while technicians were preparing to remove the scintillator tube assembly from the Fuel Building monitor, they inadvertently initiated the fifth ESF actuation which resulted in a CRVIS and a Fuel Building Isolation Signal (FBIS). The plant was in Mode 4 at the time of the incident.

A technician had intended to bypass the power supply to the Fuel Building monitor so the scintillator tube assembly could be removed without an ESF actuation. The technician inserted the bypass key into the ESF cabinet but failed to turn the key to the bypass mode. Thus, when technicians attempted to detach the detector from the Fuel Building monitor they initiated a CRVIS and FBIS. The CRVIS and FBIS were reset per plant operating procedures and the power supply to the Fuel Building monitor was properly bypassed.

The personnel involved were specifically counseled by supervision to use the utmost of caution during work activities to avoid inadvertently upsetting plant equipment. In addition, the Plant Manager and/or Assistant Plant Managers have also held a series of meetings with plant staff and support personnel. The purpose of these meetings was to enhance the communication of management's philosophy to all levels of the work force, highlight the recent Callaway events and stress the necessity for improving individual performance, group performance and communication. These meetings were completed 9/7/84.

The scintillator tube assembly from the Fuel Building monitor was installed into GK-RE-4 on 8/28/84 and no spurious spikes were received for a period of eleven days.

At approximately 1841 on 9/8/84, while in Mode 3, another spurious spike on radiation monitor GK-RE-4 initiated a CRVIS. By 2230 the CRVIS was reset per plant operating procedures.

Again, recorders were attached to the high voltage supply to the detector and to the signal output of the radiation monitor. On 9/14/84 at approximately 0927, with the plant in Mode 3, the seventh unplanned ESF actuation occurred because of a spurious spike on GK-RE-4 which resulted in a CRVIS. The CRVIS was reset per plant operating procedures. The recorder indicated that a spike was still originating within the radiation monitor. A review of the previous incidents with technical consultants indicated the problem could be due to a scintillator pulse counter overflow at the radiation monitors' microprocessing unit, RM-80. Based on these indications it was decided to replace an input/output (I/O) circuit board from the RM-80 for GK-RE-4 with an I/O circuit board from the RM-80 for the Fuel Building monitor. This was completed on 9/14/84.

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FACILITY NAME (1) Callaway Plant Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 4 8 3 8 4	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT // If more space is required, use additional NRC Form 386A's: (17)

No additional spurious alarms have been received on GK-RE-4. Spurious alarms have been received on similar monitors and are the subject of a continuing investigation as the cause. This investigation may be a long-term effort and the results will be reported as a supplement to LER 84-004-00 when complete or by 1/17/85.

No radiation above normal background was present and these incidents have in no way affected the health and safety of the public.

Previous occurrences: LERs 84-004-00; 84-025-00.

UNION ELECTRIC COMPANY
CALLAWAY PLANT

MAILING ADDRESS:
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September 21, 1984

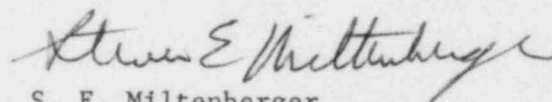
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ULNRC-933

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-25
LICENSEE EVENT REPORT 84-036-00
INADVERTENT ENGINEERED SAFETY FEATURES ACTUATION

Gentlemen:

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


S. E. Miltenberger
Manager, Callaway Plant


WRR/drs
Enclosure

cc: Distribution attached

TE22
1/1

cc distribution for ULNRC-933

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