

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 03
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TITLE (4)
Inadvertent Engineered Safety Features Actuations

EVENT DATE (6)			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)
09	15	84	84	040	00	10	15	84			0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9) 3

POWER LEVEL (10) 000

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

20.402(b)	<input type="checkbox"/>	20.406(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)	<input type="checkbox"/>
20.406(a)(1)(i)	<input type="checkbox"/>	50.38(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	73.71(c)	<input type="checkbox"/>
20.406(a)(1)(ii)	<input type="checkbox"/>	50.38(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vi)	<input type="checkbox"/>	OTHER (Specify in Abstract below and in Text, NRC Form 386A)	
20.406(a)(1)(iii)	<input type="checkbox"/>	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(vii)(A)	<input type="checkbox"/>		
20.406(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(vii)(B)	<input type="checkbox"/>		
20.406(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(ix)	<input type="checkbox"/>		

LICENSEE CONTACT FOR THIS LER (12)

NAME Michael E. Taylor - Superintendent, Operations	TELEPHONE NUMBER
	AREA CODE: 3114 TELEPHONE NUMBER: 61716-182017

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	JBLI		D232	N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On 9/15/84 and 10/10/84, Engineered Safety Features were actuated as a result of high/low steam generator (S/G) level indication. The events occurred as described below:

- On 9/15/84 a Feedwater Isolation (FWIS) occurred due to high level signals received from two of four S/G "B" level indicators. One of the two level indicators had failed high as a result of isolating common tap equipment. The second level indicator inadvertently spiked high during a valving sequence.
- On 10/10/84 a Reactor Trip, FWIS, Auxiliary Feedwater Actuation, and S/G Blowdown Isolation occurred due to low level signals from S/G "B" level indicators. The bistables of one of the level indicators were in the tripped position due to maintenance in progress. The second level indicator spiked low as a result of work in progress on common tap equipment.

To prevent similar incidents, generic instructions regarding valving sequences and instrumentation interactions are being developed to be included with work packages involving instrumentation.

There was no damage to plant equipment or release of radioactivity as a result of these incident. At no time was the public health or safety threatened.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (if more space is required, use additional NRC Form 366A's) (17)

Engineered Safety Features (ESF) were actuated on 9/15/84 and 10/10/84 as a result of inadvertent signals generated by steam generator (S/G) "B" level indicators. The initiating circumstances of each event are unique, but the action to prevent recurrence is common to both incidents. The corrective action addresses the valve manipulation deficiency and the inadequate knowledge of common tap instrumentation interaction involved in these incidents.

- At 1023 CDT on 9/15/84, a Feedwater Isolation (FWIS) occurred while the plant was in Mode 3. The actuation of this ESF resulted from high level signals received from two of four S/G "B" level indicators. The FWIS was reset and normal feedwater was restored at 1100 CDT on 9/15/84.

High S/G level signals were received from level indicators AE-LI-552 and AE-LI-529. AE-LI-552 failed in the high condition while isolating AE-LI-502. Level indicator AE-LI-502 is not one of the four channels included in the FWIS logic, but it shares a common instrument tap with AE-LI-552 on the high pressure side of the transmitters. Therefore, AE-LI-552 was also being valved out and it subsequently read high during the valving sequence. The bistables of AE-LI-552 were not put in the tripped condition when the indicator was valved out. Tripping the bistables is only required when the plant is in Modes 1 and 2.

While completing the isolation of AE-LI-502, Operations personnel inadvertently tagged out and isolated AE-LI-529. Upon realization of the error, AE-LI-529 was returned to service. At 1023 CDT on 9/15/84, AE-LI-529 inadvertently spiked high during the valving sequence returning it to service. With high S/G level signals from AE-LI-552 and AE-LI-529, the two-out-of-four logic necessary to initiate a FWIS was satisfied and the Feedwater Isolation Actuation occurred.

- On 10/10/84 the plant was in Mode 2 and at 1E-8 amps reactor power. At 1424 CDT a Reactor Trip, FWIS, Auxiliary Feedwater Actuation, and S/G Blowdown Isolation occurred due to low level signals received from AE-LI-528 and AE-LI-552. During subsequent investigation into the cause of the Reactor Trip, two additional Reactor Trip signals were received at 1826 and 1835 on 10/10/84.

Level indicator AE-LI-528 was out of service due to leakage in its instrument valve manifold. Its bistables were in the tripped position as required by the Technical Specifications, thus satisfying one logic input for a Reactor Trip.

At 1424 CDT AE-LI-552 inadvertently spiked low as a result of maintenance on AE-LI-502. Work was being performed on the root valve on the low pressure side of AE-LI-502. As previously mentioned, the high pressure side of level indicators AE-LI-502 and AE-LI-552 share a common

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TEXT (If more space is required, use additional NRC Form 368A's) (17)

instrument tap on S/G "B." It was believed that the maintenance on AE-LI-502 would not affect AE-LI-552, however, a spike was received from AE-LI-552 and the Reactor Trip occurred.

The additional Reactor Trip signals which occurred at 1826 and 1835 resulted from AE-LI-552 S/G level instrumentation spikes associated with completion of the maintenance on the root valve and restoration to service. The causal effect of these operations was not determined until approximately 2200 hours.

Corrective action taken after the 9/15/84 incident included informing Operations personnel of the importance of correctly tagging out equipment to ensure safe operation of the plant and compliance with Technical Specifications. Operations personnel were also instructed to obtain I&C assistance when isolating or restoring instrumentation to reduce the possibility of spurious signals.

As a result of the incident on 10/10/84, Temporary Operations Procedure OTS-AE-T0001, S/G Level Transmitter Removal and Restoration, was issued on 10/11/84. This procedure controls the activities associated with isolating and restoring level transmitters during root valve maintenance.

To prevent recurrence of this type of incident with regard to general plant instrumentation, generic instructions regarding valving sequences and interactions between the pertinent instrumentation and other plant systems are being developed to be included with work packages related to instrumentation.

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

Previous occurrences: A similar incident occurred on 9/7/84 and was reported on 10/6/84 via LER 84-035-00. The corrective action taken at that time resolved the problem with the particular instrumentation interactions involved in the event. The action to prevent recurrence described in this LER is being implemented to address similar incidents with other plant instrumentation.

UNION ELECTRIC COMPANY
CALLAWAY PLANT

MAILING ADDRESS:
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October 15, 1984

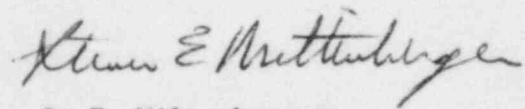
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ULNRC-950

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-25
LICENSEE EVENT REPORT 84-040-00
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.



S. E. Miltenberger
Manager, Callaway Plant

5 on JWK
MET/CDN/JWK/drs
Enclosure

cc: Distribution attached

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cc distribution for ULNRC-950

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