

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 4	
TITLE (4) Reactor Protection System Actuation																
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 8	2 0	8 5	8 5	0 3	9	0 0	0 9	1 9	8 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)														
1		20.402(b)				20.406(c)				50.73(a)(2)(iv)				73.71(b)		
POWER LEVEL (10)		20.405(a)(1)(i)				50.36(c)(1)				50.73(a)(2)(iv)				73.71(c)		
0 2 5		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 Michael E. Taylor - Superintendent, Operations										TELEPHONE NUMBER						
										AREA CODE 3 1 4 6 7 6 - 8 2 0 7						
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						
X	SIN	VII	C 1 6 1 6 1 5	N												
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)

On 8/20/85 at approximately 2140 CDT a reactor trip occurred during unit startup. The plant was in Mode 1, Power Operation, at 25% power and normal operating temperature and pressure. A turbine trip occurred as the result of Moisture Separator Reheater (MSR) "B" high level signal due to the loss of the drain path from Heater Drain Tank "B." The normal drain path was lost due to check valve AFV-160 which had stuck closed. The alternate path was lost due to a valve which had not been properly repositioned for normal operation after maintenance.

The transient caused by the turbine trip resulted in a Steam Generator "C" Lo-Lo level signal which caused a Reactor Trip, Feedwater Isolation, Auxiliary Feedwater Actuation and a Steam Generator Blowdown and Sample Isolation. All safety components actuated per design. The operators stabilized the plant, determined the cause of the trip and commenced a recovery in accordance with plant procedures.

Corrective action for this event included a verification of correct valve positions for the MSR drains and freeing of check valve AFV-160.

To prevent recurrence, a letter was issued to the Shift Supervisors concerning their responsibilities for control of work activities.

The appropriate safety features responded per design and thereby prevented this incident from endangering the public health and safety.

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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 8 5 — 0 3 9 — 0 0 0 2 OF 0 4	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

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

Background

During restart following a reactor trip (LER 85-038-00) on 8/20/85, maintenance was being performed to repair leaks on first and second stage Reheat Steam Valves⁽¹⁾ leading to "B" and "C" Moisture Separator Reheaters (MSR).⁽²⁾ While effecting these repairs, a condenser low vacuum alarm occurred at approximately 1400 CDT. At that time, in an attempt⁽³⁾ to maintain condenser vacuum, operators isolated the manual dump valves⁽³⁾ for "B" and "C" MSR Drain Tanks and first and second⁽⁴⁾ stage Reheater Drain Tanks⁽⁴⁾ along with the low point drain valves⁽⁵⁾ from "B" and "C" MSRs to the condenser all of which had not been tagged out for this repair work. The condenser low vacuum alarm cleared at approximately 1430 CDT. A decision was made by the Shift Supervisors during shift turnover to make a list of those valves which had been repositioned but not included on the WPA (Workman's Protection Assurance) tagout. A complete tagout of the first and second stage reheat system would then be completed. This list included the MSR "B" Drain Tank High Level dump manual isolation valve, ADV-0267.

At approximately 1700 CDT the second stage reheat steam tagout was completed. Maintenance reported that the first stage reheat steam leak repair was completed and therefore a complete tagout was no longer required. However, no valve position verification was required other than those required on the tagout. Since ADV-0267 was not tagged, it was not repositioned. At approximately 1911 CDT, the operators started rolling the main turbine.

Event

At 2140 CDT on 8/20/85, with the plant in Mode 1, Power Operation, at 25% power and normal operating pressure and temperature, the main turbine tripped on MSR "B" Hi-Hi Level. The transient induced by the turbine trip caused the level in Steam Generator "C" to shrink below the Lo-Lo level setpoint causing a Reactor Trip, Feedwater Isolation, Auxiliary Feedwater Actuation and Steam Generator Blowdown and Sample Isolation.

The operators recovered from the trip per plant operating procedures. Recovery procedures were completed at approximately 2154 CDT.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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EXPIRES 8/31/85

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LER NUMBER (6)

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Callaway Plant Unit 1

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TEXT (If more space is required, use additional NRC Form 365A's) (17)

Root Cause

Failure of AFV-160 to open. Work Request to repair is open and will be worked during the refueling outage.

Failure to observe and respond to the MSR "B" Drain Tank Hi Level Alarm during startup.

Failure of the operators to recognize that ADV-0267 was still closed.

Immediate Action

The WPA Operator (licensed RO) reviewed the list provided at shift turnover of valves which had been repositioned without tagging and realized ADV-0267 was closed. Subsequent investigation revealed that the check valve (AFV-160)⁽⁶⁾ in the normal drain path had stuck shut. With both of these pathways isolated, level in the MSR increased until the hi level trip occurred. The WPA Operator was immediately dispatched to open ADV-0267 and level in the MSR was reduced below the trip setpoint. The plant was stabilized and a recovery was commenced in accordance with plant procedures.

A Work Request was written to repair the stuck check valve AFV-160.

Action to Prevent Recurrence

A letter was issued to Shift Supervisors re-emphasizing their responsibilities and actions to be taken in relation to this and previous events.

Additionally, a task force has been formed to review Callaway Plant reactor trips for 1985 to determine any underlying root causes and recommend corrective action, as appropriate.

Safety Significance

The appropriate safety features responded per design and thereby prevented this incident from endangering the public health and safety.

Previous occurrences: none

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EXPIRES 8/31/85

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TEXT (If more space is required, use additional NRC Form 365A's) (17)

Footnotes

- (1) IEEE Standard 805-1983 System - SB
IEEE Standard 803A-1983 Component - V
- (2) IEEE Standard 805-1983 System - SB
IEEE Standard 803A-1983 Component - MSR
- (3) IEEE Standard 805-1983 System - SD
IEEE Standard 803A-1983 Component - ISV
- (4) IEEE Standard 805-1983 System - SB
IEEE Standard 803A-1983 Component - TK
- (5) IEEE Standard 805-1983 System - SN
IEEE Standard 803A-1983 Component - V
- (6) IEEE Standard 805-1983 System - SB
IEEE Standard 803A-1983 Component - V
Manufacturer - Crane Co.
Model No. - 10GBD-CKT-W

UNION ELECTRIC COMPANY
CALLAWAY PLANT

MAILING ADDRESS:
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September 19, 1985

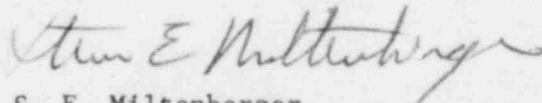
U. S. Nuclear Regulatory Commission
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ULNRC-1178

Gentlemen:

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30
LICENSEE EVENT REPORT 85-039-00
TURBINE/REACTOR TRIP ON HI MSR LEVEL

The enclosed Licensee Event Report is submitted pursuant to
10 CFR 50.73(a)(2)(iv) concerning a Turbine/Reactor Trip on Hi
Moisture Separator Reheater Level.



S. E. Miltenberger
Manager, Callaway Plant

MET/WRB/drs
Enclosure

cc: Distribution attached

IE22
1/1

cc distribution for ULNRC-1178

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N. Date