

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Callaway Plant Unit 1 DOCKET NUMBER (2) 0500048131 OF 03

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)					
1	0	2	2	8	4	8	4	0	5	6	0	0	0	0	0	0
1	0	2	2	8	4	8	4	0	5	6	0	0	0	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) <input checked="" type="checkbox"/> 20.406(e) <input checked="" type="checkbox"/> 50.73(a)(2)(iv) <input type="checkbox"/> 73.71(b) <input type="checkbox"/>
POWER LEVEL (10) 004	20.406(a)(1)(i) <input type="checkbox"/> 50.36(e)(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"/> 50.36(e)(2) <input type="checkbox"/> 50.73(a)(2)(vii) <input type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 366A) <input type="checkbox"/>
	20.406(a)(1)(iii) <input type="checkbox"/> 50.73(a)(2)(i) <input type="checkbox"/> 50.73(a)(2)(viii)(A) <input type="checkbox"/>
	20.406(a)(1)(iv) <input type="checkbox"/> 50.73(a)(2)(ii) <input type="checkbox"/> 50.73(a)(2)(viii)(B) <input type="checkbox"/>
	20.406(a)(1)(v) <input type="checkbox"/> 50.73(a)(2)(iii) <input type="checkbox"/> 50.73(a)(2)(x) <input type="checkbox"/>

LICENSEE CONTACT FOR THIS LER (12)

NAME Michael E. Taylor - Superintendent, Operations TELEPHONE NUMBER 3114617161-18121017

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDs

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 10/22/84 and 10/23/84, the reactor was tripped and Engineered Safety Features (ESF) actuated while rolling the main turbine. A Feedwater Isolation (FWIS), Auxiliary Feedwater Actuation (AFAS), and Steam Generator Blowdown Isolation (SGBDIS) occurred during both incidents. The ESF equipment performed as designed.

Both incidents occurred as a result of steam generator (S/G) oscillations while attempting to bring the turbine to speed and parallel the generator to the grid. After a turbine trip on 10/22/84, a high S/G level caused a FWIS, AFAS, and SGBDIS. A Reactor Trip then occurred due to a low S/G level. On 10/23/84, S/G level oscillations set up by steam dump cycling during the main turbine roll to speed caused a FWIS, AFAS, and SGBDIS. A subsequent low S/G level caused a Reactor Trip.

Corrective actions included procedure revisions pertinent to each incident. There was no damage to plant equipment or release of radioactivity as a result of these incidents. At no time was the public health or safety threatened.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/95

FACILITY NAME (1)

Callaway Plant Unit 1

DOCKET NUMBER (2)

0500048384

LER NUMBER (6)

YEAR SEQUENTIAL PREVISION

NUMBER NUMBER NUMBER

0516-010

PAGE (3)

02 OF 03

TEXT (If more space is required, use additional NRC Form 388A's) (17)

At 0513 CDT on 10/22/84 and 1527 on 10/23/84, Engineered Safety Features (ESF) were actuated with Reactor Trips occurring shortly thereafter. High/low steam generator (S/G) levels obtained while rolling the main turbine initiated the Feedwater Isolations (FWIS), Auxiliary Feedwater Actuators (AFAS), S/G Blowdown Isolations (SGBDIS), and Reactor Trips. The ESF equipment performed as designed in both cases.

1. At 0054 on 10/22/84 while in Mode 1, the main turbine was rolling at 1800 r.p.m. and the reactor was at a power level of approximately 9.5%. At 0132 the operators began increasing Reactor Power to 15%. While waiting to synchronize to the grid, the turbine exhaust hood temperatures and the turbine vibration were increasing. At 0501 the operator was instructed to select "close valves" to shutdown the turbine. Immediately after he selected "close valves" the turbine tripped from high exhaust hood temperature.

The operators began reducing Reactor Power and at 0509 broke the condenser vacuum to slow the turbine. The start of both motor-driven Auxiliary Feedwater Pumps caused level variations in the S/Gs and at 0513 a high level in S/G "B" initiated a FWIS, AFAS, and SGBDIS. Reactor Power had been reduced to 4.2% and Mode 2 had been entered when these actuations occurred.

At 0521, the reactor tripped due to a low S/G "D" level. Reactor Power had been further reduced to 3.5% when the trip occurred. Emergency Operating Procedures E-0, Reactor Trip or Safety Injection, and ES-0.1, Reactor Trip Recovery, were performed and the plant stabilized. The FWIS was reset to restore feed from the condenser. While recovering from the incident, a second Reactor Trip signal and FWIS was received at 0553 due to a low level in S/G "D."

2. At 1510 on 10/23/84 while in Mode 1, the reactor was at approximately 15% power and the operators were in the process of rolling the main turbine. At approximately 400 r.p.m., increasing, the Condenser Available Interlock (C-9) for the steam dump valves began to cycle on and off causing the steam dump valves to cycle.

When steam was dumped a C-9 signal was initiated and the steam dumps closed. As sufficient vacuum was regained, thus clearing the C-9 interlock, the steam dumps reopened. Continued steam dump cycling caused level oscillations in the S/Gs.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (3)

PAGE (3)

Callaway Plant Unit 1

0 | 5 | 0 | 0 | 0 | 4 | 8 | 3 | 8 | 4 | - | 0 | 5 | 6 | - | 0 | 0 | 0 | 3 | OF 0 | 3

TEXT (If more space is required, use additional NRC Form 388A's) (17)

At 1527 a S/G "B" high level initiated a FWIS, AFAS, and SGBDIS. The main turbine, which was at 1400 r.p.m., also tripped. At 1531, the reactor tripped on a low S/G "C" level caused by the drop in feedwater temperature when the FWIS and AFAS occurred. The operators performed Emergency Operating Procedures E-0 and ES-0.1 and stabilized the plant.

The high exhaust hood temperature which caused the Turbine Trip on 10/22/84 was due to running the main turbine unloaded for an excessive period of time. To prevent recurrence of this incident, a precaution regarding running the main turbine unloaded for longer than one hour was added to Normal Operating Procedure OTN-AC-00001, Main Turbine and Generator Systems, on 10/31/84.

The problem experienced with steam dump cycling on 10/23/84 has been corrected by rolling the main turbine up to speed at 5 to 10% Reactor Power rather than 15%, thus reducing the amount of steam being dumped to the condenser. General Operating Procedure OTG-ZZ-00003, Plant Startup Less Than or Equal to 5% to 20% Power, was revised on 11/5/84 to implement this corrective action. No further corrective action for either incident is deemed necessary.

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

Previous occurrences: none

UNION ELECTRIC COMPANY
CALLAWAY PLANT

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November 26, 1984

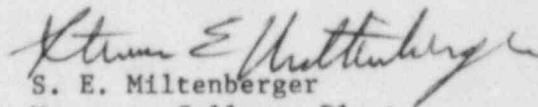
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ULNRC-985

DOCKET NUMBER 50-483
CALLAWAY PLANT UNIT 1
FACILITY OPERATING LICENSE NPF-30
LICENSEE EVENT REPORT 84-056-00
INADVERTENT ENGINEERED SAFETY FEATURES ACTUATIONS

Gentlemen:

The attached page 1 of LER 84-056-00 may have been omitted from
the original transmittal, ULNRC-981 dated November 20, 1984.


S. E. Miltenberger
Manager, Callaway Plant

JWK/drs
Enclosure

cc: Distribution attached

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cc distribution for ULNRC-985

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